FORM NO. 51.61 MAY 1949

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SECURITY INFORMATION

CENTRAL INTELLIGENCE AGENCY

INTELLOFAX 21

INFORMATION REPORT

REPORT NO. [redacted]

CD NO. [redacted]

COUNTRY East Germany

DATE DISTR. 12 November 1952

SUBJECT 1. Plan Concerning the Overhaul of a 200-ton Ferry
2. Specifications for the Construction of a Bridge

NO. OF PAGES [redacted]

PLACE ACQUIRED [redacted]

NO. OF ENCLS. 6 (40 pages; 18 negatives) (LISTED BELOW)

DATE OF INFO. ACQUIRED [redacted]

SUPPLEMENT TO REPORT NO.

[redacted]

Attachments:
A. Copy of a legal document, translated from German, concerning the overhaul of a 200-ton ferry.
B. Copy of technical specifications for the manufacture of a bridge (with diagrams).
C. Copy of charts and diagrams of the middle section of a truss for the bridge.
D. Copy of the welding plan and work sequence.
E. Eighteen negatives of engineering charts.
F. Additional information concerning the bridge.

Distribution: ORR
Army

[redacted]

THIS DOCUMENT HAS AN ENCLOSURE ATTACHED
DO NOT DETACH

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 of Oct.1951

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LEGAL DOCUMENT.

We, the undersigned commission consisting of the president, director of the mechanical shop RYSCHKOW, N.W. and the following members: chief engineer GORDEJOW, S.S., engineer LUKAS, interpreter GROSSMANN, and the owner of the firm "WILHELM ERTEL", Otto ERTEL have drawn up the following document while taking temporary charge of the 200 Ton ferry, consisting of two selfpowered hulls, Inventory No 1-604, which will be completely overhauled by the firm "ERTEL".

The commission found following discrepancies during the acceptance:

1. The rust between all pontoons of both hulls has not been removed, and the surface of the walls has not been painted.

2. On the outside walls and on the floors of both hulls, the tar has been applied directly on the rust, which is not permissible.

3. The skeleton (ribbs and struts) has been painted at the joints without previously removing the rust. The insides of the hulls have been painted poorly in parts, and in parts not at all.

4. All superstructures and all parts above the waterline have to be re-painted.

5. The rust in the aft area has not been removed.

6. 40 to 50% of the metal-covering of the braces must be replaced because it is completely rusted through.

7. The hulls under the (rock woods or woody asbestos ??) have not been cleaned from rust, and have not been painted.

8. On the superstructures, the paint has been applied to the rust.

9. Some of the rivets are loose.

10. The outside wall in the area of the 2nd and 3rd strut has reached a thickness of down to 2mm; due to rust.

ENCLOSURE (A)

A commission including a representative from the "German Ship Revision and Classification", branch office of BERLIN, will determine if the floor at the prow should be re-enforced or renewed.

All above-mentioned discrepancies found by the commission should be taken care of during the overhauling of the ferry.

THE COMMISSION.

Director of the mechanical shop	(RYSCHKOW, N.W.)
Chief Engineer	(GORDEJOW, S.S.)
Engineer	(LUKAS)
Interpreter	(GROSSMANN)
Owner of the Firm "W. ERTEL, Shipswarft"	(Otto ERTEL)

TECHNICAL SPECIFICATIONS

for the

MANUFACTURING of METALLIC STRUCTURE

Temporary Technical Agreements

1. Production and receipt of goods is accomplished according to work charts 4188 R 1949 as per technical conditions (TU).

Preparation of parts of the bridge must be undertaken under a specially prepared technological process in agreement with the contractor and affirmed by chief engineer of the factory.

2. Upon delivery, volume and nomenclature is determined by construction records, which are included in agreement.

3. Production of bridging material must be manufactured of open-hearth steel 3, of group A in conformance GOST (governmental standards) 380-41, with additional full guarantee, contents of sulphur, phosphorus and carbon according to group B. Use of bessemer and thomas steel prohibited.

4. Quality of material must certified in writing. In absence of this certificate a mechanical and chemical test and analysis must be made.

5. Size of rolled stock should not exceed limitations established GOST or OST (general standards) for specification and design.

6. For production (manufacturing) of pivot bolts, pintle hooks and bolts specifications are: SB3, (SB is number of sketch) SB4, SB14, SB15, ST5. Span hearth of group A must be used.

7. Welding must be done solely of high-grade electrode brand 342-A in conformance GOST 2523-44.

8. All welding seams are specified to be of UKD (Ultra-short arc) electrods brand TzM 7-ak, (TzM signifies thickness of electrods).

9. Decking (flooring) must be of 1st grade pine, specification must meet requirements of GOST 3008-45. Specification for metal fittings for securing flooring must meet requirements, GOST 1824-46.

10. Zinc covered cable must be used in accordance with GOST 3070-46 and 3071-46. Pulling resistance not less than P= 140 Kg. per m m^2.

11. For painting use the following material:

a. Iron red lead $\frac{\text{OST}}{\text{MKTP*}}$ $\frac{7814}{753}$

b. Red lead in compliance with GOST 1787-42

c. Dark green paint -- make 4 BO

*MKTP - Ministry of Heavy Industry

ENCLOSURE (B)

[redacted] (Att. B.)

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d. White lead in compliance with GOST 8190 / NKTP 1187

e. Natural boiled oil in compliance with GOST 520 / NKTP

f. Mixing oil for paint (quick drying) mixture in compliance with GOST 190-41

Using other types of oil is not allowed; also is not allowed to use drier for speeding of drying paint in excess of 5%. Drying oil mixture could be used only by special permission of the client.

12. Cutting must be done mechanically with cutter, saw files and etc. Also hand cutting torch or with the help of shears. Electrical weld cutting forbidden. After cutting with torch, edges must be thoroughly cleaned of slag, dross or any other foreign substance.

13. Shaping of edges is compulsory in every detail as shown on drawings A, variation allowance of 2 m m is permitted on mechanical cuttery; 4 mm on oxygen acetylene cutting.

14. Steel sheeting used as reinforcing, and reinforcing plates (corners, points) must be cleaned of burrs, dross, fluxes after cutting. Special attention must be paid to the flat surfaces. There must be no uneveness on any surface that will interfere with the snug fittness of the part.

15. Drilling of holes must be done exclusively with drill to its full diameter, according to drawings. Burrs and rough edges must be removed.

16. Threads must be clean and smooth without burrs and flaws, absolutely no cross threads. Threads must not be cut to total more than 1/3 of circumference.

17. Processing of burls of pivot bolts (or pintle) (SB 3, SB 14) must be cleaned in conformance with drawings. Their stems must be turned, straight with smooth surface, without cracks, or any other defects.

18. All surfaces of main girder must be trimmed so as to be absolutely perpendicular to the axis of girder in all directions. SB 1 and SB 2.

WELDING

19. Electro-welding must be done only by the previous established technical process on either--alternate or direct current. Requirements of electrode--see par. 7.

20. Upon finishing welding joints (or seams) and base of metal must be elaborately cleaned of splashes of metal and dross.

21. The welding of the joints and edges, etc., must be executed correctly in compliance with sketch.

22. Prior to welding, all surfaces must be thoroughly cleaned of rust, paint, dirt, oil, and must be rubbed with steel brush, scrapers, etc. The cleaning can also be done with flame.

23. During welding of construction the bead must penetrate thru fundamental metal to depth not less than 1.5 mm. Depth is checked by demand of OTK (Technical Control Section) or by military representative as shown by a polished cross-section specimen. A hole is drilled to determine depth of weld. At least one hole is drilled in each section. Upon discovering of flaw 2 more tests must be done. If 2 tests out of 3 turn out unsatisfactory, joint (seam) must be cut with chisel and re-welded. To cover defective welding joint by welding an additional bead on top of the defective bead is forbidden.

24. Welding beads must completely fill all seams and joints and must be flush with the welded pieces.

25. Surface of joint must be smooth, not porous, free of oxide. The weld at the joints must be smooth. Appearance on the joints of porous, unevenness, oxide, dross, etc., is not acceptable.

26. When basic metal is less than 4 mm thick, a deviation in the size of the weld must not exceed 1 mm in height, 2 mm in width is allowed. When basic metal is more than 4 mm thick a deviation in the size of the weld must not exceed 2 mm height, 4 mm in width is allowed. No deviation less than the specified weld is permitted.

27. Undercutting of basic metal allowed up to not more than 0.5 mm in depth. If metal is undercut more than 0.5 mm, an additional piece of metal must be welded on and surface must be absolutely smooth so as to look like one solid piece.

28. In doing welding work only professional welders who are holding documents (passports) could work as welders. Every welder must put on his welding which he completes, his given mark or seal.

29. Items of like nomenclature bridging material must be of the same dimension so that they are interchangeable. Assembling must be done according to specifications of the OTK.

30. To insure the interchangeability of major girders (SB 1 and SB 2) and of the launching nose (SB 11, 12, 13) these sections are brought for welding to a special steel templates.

31. Drilling of holes in the major girders, launching nose and also footers and spanner of the gantry (SB 18) should be done on jig drills.

32. During assembly of major girders alignment of the drill must fully conform with drawings.

33. When joining two sections together (SB 2) deviation must not exceed 6 mm in elevation.

Permissible Variations

34. Allowances in sizes which is specified in sketches, must be absolutely complied with.

35. Allowances of sizes acceptable in accordance with table given below:

Normal Dimensions	Permissible Variation		Normal Dimension	Permissible Variation	
Sizes in mm	In mm		Sizes in mm	In mm	
	+	-		+	-
From 1 to 3	0,40	0,40	From 500 to 800	3,0	3,0
3 6	0,5	0,5	800 1000	3,5	3,5
6 10	0,6	0,6	1000 1250	4,0	4,0
10 18	0,70	0,70	1250 1600	4,5	4,5
18 30	0,8	0,8	1600 2000	5,0	5,0
30 50	1,00	1,00	over 2000	5,0	5,0
50 80	1,20	1,20			
80 120	1,40	1,40			
120 180	1,60	1,60			
180 260	1,90	1,90			
260 360	2,20	2,20			
360 500	2,50	2,50			

36. Distortion (deformation) of axle elements must not exceed 1:1000 of its length.

37. Variety of lengths of diagonals of all surfaces of mounting factors of major girder (or trussed beams) and launching nose must not exceed 3 mm.

38. All cutting must comply exactly with 3rd class requirements (Russian). This is a very exact requirement.

Painting of Sections and Packaging

39. Prepared and assembled speciment presented by factory unpainted, but places which are unapproachable for painting in assembled form are painted previously in the factory. Final painting is done after passing completed testings, and presented for delivery separately.

40. When bridge section are accepted by military representatives section must be thoroughly cleaned of rust, dross, dirt, dust and oily spots prior to painting. Cleaning is done by using sand blast, metal scraper, and with hand or pneumatic brushes, after which rubbing of all surface with rags or waste dipped in gas or in turpentine. Using of kerosene is forbidden.

41. Materials for painting must be in conformance with Par XI of these specifications.

42. Bridge section must be inspected by military representive prior to

application of primer, (lead or iron oxide paint). Prior to priming, all cracks must be thoroughly filled with mastic which contains; lead, chalk, and linseed oil. When primer coat is being applied, particular attention must be given to welded joints, grooves, and all connections. Paint should be applied so that every surface is completely covered and no lapping visible. All places where primer coat is defective or applied unevenly, it must be scraped off and reprimed. Quality of priming is accepted by OTK and the military representative.

43. Painting of all surfaces with the exception of the threads of the fastening bolts must be painted in dark green color twice when temperature not less than 32° fahrenheit. Place where painting is done must be free of atmospheric moisture and dust. Second coat must not be applied until the previous coat is completely dry. Paint must be applied evenly without any runs or flaws.

44. Threads of fastening bolts are covered by technically specified vaseline or lubricant oil.

45. On every section of major girder and launching nose after painting serial number of the section, date and facts of completion must be indicated by white paint.

46. Reinforcing products such as SB 3.4. 4-1. 7. 14. 17. Turn-buckles for the cable and also the instruments are packed in tare crates with handles. In each box a packing list of items in the box must be included. This list must be undersigned by OTK of the factory and the military representative. Gross weight of the box and contents should not exceed 80 Kg.

Procedure of acceptance of Products

47. Acceptance of material by OTK of the factory for manufacture. OTK must inspect the following:

a. Suitableness of material which is delivered for the manufacture in compliance with plans: Delivery of material must be done under the observation of the OTK. Processing of material without prior permission by OTK is forbidden.

b. Quality of manufacture of all details and sizes must correspond with the plans.

c. Quality of welding (particular attention must be concentrated on the welding of lower and upper joints of the major girder and launching nose.

d. The geometrical sizes and allowance of the constructed section must be in accordance with the current T.U:

e. Quality of paint and oil.

48. Prior of delivering semifinished material for assembling, the semi-finished material must accepted by OTK: material which is accepted by OTK must be so stamped.

49. Acceptance of welding is done either by seperate bundles or as a whole. Acceptance of joints which are not stamped by welders who were working on them, is not allowed.

50. Act of acceptance of assembled parts of bridging material must be undersigned by OTK after inspecting of its interchangeability by way of joining it with previously inspected material which has met the standards of weights and measures.

51. Jigs for drilling (or boring) and for assembling of constructions must be accepted by OTK prior of using such.

52. Conformity of the material being prepared for delivery must conform with the charts and technical specification for manufacture upon delivery. Documents of conformations must be presented to client showing acceptance of construction by OTK of factory which produced it.

53. On all material SB 1, 2, 11, 12, and 13, condition of agreement and date of production must be indicated on each item. Markings must be done in white oily paint, or by attaching tag with above mentioned indications.

54. Material which is delivered to the client must be completely in finished form.

55. Acceptance of produced material by client must be done prior of priming and painting. Acceptance of painted material is done after application of second coat of paint--separately.

56. Material which is presented for delivery is subject to the following tests upon receiving.

On Span Construction

A. Assembling of each major girder of the bridge with a load capacity of 16 ton span 25 meters.

For checking on fullfillment of geometrical sizes and interchangeability of assembling material of girders. Ends of assembled span construction must rest on shore foundation beams and distance from lower girder to ground must not be less than 20-30 cm.

The following assembled span material must undergo size checking:

1. Span

2. Width of major girder

3. Height of major girder

4. Length embutment panels

5. Cross section of girders

6. Sizes of supports girders, especially those connected with launching nose.

7. Length of diagonal truses of the girders both longitudinal and lateral.

Upon receipt, sizes are checked sectionally by paragraph 2-7.

Client has option upon selecting other material according to his judgment.

All measured sizes must fully comply with drawings and standards of TU. Assembled span construction must not have recess or bends within vertical and horizontal surface.

Deviation of 3 mm is allowed at the joints in trussing major girders with the upper girder.

Tolleranses in upper girders joints must not exceed 1.0 mm.

Checking of interchangeable material is done by process of assembling of the span construction. And the same time rearrangement of intermediate (interchangeable joints) girders is done at the discretion of military representatives.

Checking on interchangeability of panels of the deck and flooring could be done by master template. During checking of interchangeability bending (or gripping) must not occur; all similar major assemblies must join without obstruction, regardless of their location during assembling of span construction.

B. Testing of assembled Major Girder

(See p. "a" current specification) of statistical weights.

Every assembled girder, in compliance of p. "a" of regular divisions of 2 ends and 6 intermediate sections of total length of 25.0 m undergo test of statistical load P = 18.00 ton in conformance with drawings # 1 (annex # 1). Testing under weight is done up to full deflection of sag for at least 30 minutes. Sagging is determined within each joint of tested girder, including supporting joint. Taking into account possible settling of footings. Sagging is determined by deflectometers or by surveying. Saggings are measured separately for both flat-girders. Readings are written in the following stages of the tests:

1. Prior loading of girders.
2. Upon lorry reaching center of span.
3. 30 minutes after placing of lorry in the center of span.
4. After removing of lorry from girders.

Difference in sagging of right and left girders must not exceed 3-5 mm. Excess sagging of both girders must not exceed 15 mm. After 15 minute interval between tests, testings are resumed again using above mentioned limitation of sagging. After second test has been completed and lorry no sag is to remain. Girders are accepted if no sagging is indicated.

Presence of excess sagging is indicated by continuous pressure on joint lugs development of cracks, flaws in welded joints, etc.

Therefore upon presence of excess saggings particular examining of girders must be done, and in particular the intermediate sections.

Upon presence of excess sagging, after second loading of weights on girders, but lack of visible defects within principal metal or within welded joints, then repetition of load of weights on girders is repeated 5 times. If after the last three loads of weights further sagging does not appear then girders

after examination of the condition of their joint and lugs and a satisfactorily technical explanation giving reasons for appearance of remaining deformations, they are accepted.

Upon discovery of creeks or flaws in basic metal and in welded seams, or runs of painting, then this material is rejected.

In case, even one (girder) is rejected during inspection then whole lot must undergo of re-inspection under load test.

Then in this case all defective material is removed and replaced with new material, after which, testings of material of that particular lot is done again.

After first pair of girders of middle section has been tested, then first pair is interchanged with second pair of girders for testing. After corresponding interchange between second and third pair of intermediate girders, testing is repeated, then testing of all intermediate section of girders is repeated.

Inspection Methods of Assembly

A. Assembly of each frame (drawing No: SB 18) for checking of general sizes and interchangeability of factors; the following items undergo checking:

1. Distance between shafts of the fastings of frame No: SB 18.
2. Distance from foundation plate to the lower part of cross.
3. Length of diagonal lines.
4. Gage of material.

All sizes must fully correspond with drawings of (actual)technical agreement. Length of diagonal lines must not differ more than 10 mm.

During assembling of frames, places of jaring must not occur, and similar assembling fittings must be fully interchangeable.

B. Assembling of each launching nose, and connecting it to the (main) girder of the bridge, is accepted by standards.

During assembling middle section of launching nose is connected with front and rear sections twice--alternately at both ends, joining together of assembling units and connecting launching nose to the main girder must be done without obstruction.

C. At least one assembly frame of each lot must undergo test for sturdiness. During test weight of 3 tons is suspended by pully to assembling frame (sketch No: SB 18). Weight is hung 1 millimeter above the ground and hangs in that position for 15 minutes. After that the weight is shifted on the cross bars with the help of chainfall, in such a way so pully with weight will be in position on the very end of the assembly frame. Weight must be held in each principal position twice, for 5 minutes each time. After weight is removed, frame (sketch SB 18) is dismantel and its material undergo strict inspection.

D. Each produced launching nose must undergo test in compliance with drawings: No: 2 and 3 Enclosure No: 2.

Sequence of testing is brought out in standard annexes and additional explanations are not required.

In case splits or cracks is discovered in welded joints of girder or any other kind of flaws in joints of girder SB 1, during testing in compliance of drawing No: 3, then this element is rejected and all other remaining material SB 2 within same lot which is produced by the factory for delivery undergo obligatory testing of above mentioned joints.

Composed:

(Slonim)
(Krylov)

[redacted] (Ill. C)

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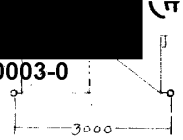
Middle Section of Truss Sketch T 63014



For one Steel Bridge: 72 Sections For 3 steel Bridges: 216 Pieces

Item #	Pieces Per Section	Pieces Per Bridge	Nomenclature of material	Sketch #	Type of material	Weight kg	Remarks
1	2	48	Channel iron NP 18 cm - 2938	63014	Steel 37.12	129.0	2/48
2	2	48	Channel iron NP 14 cm - 2780	"	"	89.0	2/48
3	4	96	Angle iron 90x90x9 mm - 1940 mm	"	"	94.7	4/96
4	2	48	- " - 60x60x6 - 1500	"	"	16.2	2/48
5	4	96	- " - - " - - 1430	"	"	31.0	4/96
6	3	72	- " - 35x35x4 - 1030	"	"	6.5	3/72
7	4	96	- " - - " - - 770	"	"	6.4	4/96
8	3	72	- " - - " - - 1090	"	"	6.9	3/72
9	4	96	- " - - " - - 785	"	"	8.0	Right & left 4/96
10	2	48	- " - - " - - 763	"	"	3.2	2/48
11	2	48	Channel iron NP 10 cm - 717	"	"	15.1	2/48
12	4	96	- " - - 660	"	"	28.8	4/96
13	2	48	Steel sheeting 6 mm 120x190	"	Steel 37.21	1.8	Template 2/48
14	2	48	- " - 7 mm 300x390	63031-2	"	6.3	2/48 "
15	2	48	- " - 18 mm 310x400	63031-1	"	27.0	2/48 "
16	2	48	- " - 5 mm 120x160	63014	"	1.2	2/48 "
17	2	48	- " - 18 mm 140x400	63031-3	"	13.5	2/48 "
18	2	48	- " - 6 mm 240x490	63014	"	11.4	2/48 "
19	2	48	- " - 20 mm 140x400	63031-6	"	14.8	2/48 "
20	4	96	- " - 6 mm 80x100	63014	"	1.5	4/96 "
21	4	96	- " - 6 mm 80x220	"	"	3.3	4/96 "
22	2	48	- " - 6 mm 90x90	"	"	0.8	2/48 "
23	4	96	- " - 8 mm 140x280	"	"	8.8	4/96 "
24	4	96	- " - 8 mm 160x210	"	"	8.4	4/96 "
25	2	48	Saddle steel 70x35 length 180 steel	63031-7	37.11	5.4	To be shaped
26	2	48	Cushions (bed) 60x25 length 180	63031-8	"	3.4	"
27	2	48	Steel sheeting 6 mm 80x100	63014	37.12	0.8	Prepared by pattern
28	4	96	- " - 8 mm 120x80	63031-9	"	2.0	"
						545.0 Kg.	

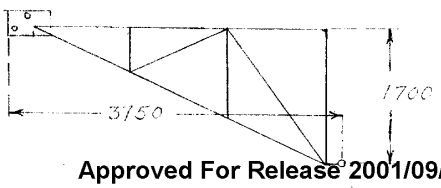
ENCLOSURE (C)

25X1A

Section Span of Truss Sketch T 63015

For one Steel Bridge: 32 sections For 3 bridges: 96 pieces

Item #	Pieces	Nomenclature of material	Sketch #	Type of material	Weight	Remarks
1	2	Channel iron NP 18 cm - 3717	T 63015	Steel 37.12	163.5	
2	2	- " - 14 cm - 3647 (Right & left)	"	"	116.8	
3	2	- " - 14 cm - 800	"	"	25.6	
4	1	- " - 10 cm - 770	"	"	8.2	
5	1	- " - 10 cm - 150	"	"	1.6	
6	3	Angle iron 35x35x4 - 1250	"	"	7.9	
7	4	- " - - " - - 770	"	"	6.4	
8	2	- " - - " - - 580	"	"	2.4	
9	2	- " - 75x75x8 - 1745 (Right & left)	"	"	31.6	
10	2	- " - 35x35x4 - 985	"	"	4.0	
11	1	- " - - " - - 763	"	"	1.6	
12	1	Channel iron NP 10 cm - 717	"	"	7.6	
13	2	- " - 10 cm - 680	"	"	14.4	
14	2	Angle iron 60x60x6 - 860 (Right & left)	"	"	9.3	
15	2	- " - 60x60x6 - 1400	"	"	15.1	
16	2	- " - 60x60x6 - 925 (Right & left)	"	"	10.0	
17	2	Steel sheeting 5 mm 160x120	63014-16	37.12	1.4	To be prepared with pattern
18	1	- " - 18 mm 400 as 14 - 17	63031	"	6.8	"
19	1	Diameter 20 mm-100 mm round stuck	63015	50.11	0.2	Forged
20	1	Steel sheeting 20 mm 400 as 14 - 19	63031-6	37.21	7.4	To be prepared with pattern
21	4	- " - 80 x 6 - 100 as 14 - 20	63015	"	1.2	"
22	2	- " - 80 x 6 - 240	"	"	1.6	"
23	1	- " - 90 x 6 - 90	"	"	0.4	"
			Altogether		445.0	Kg



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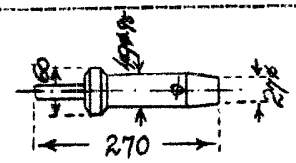
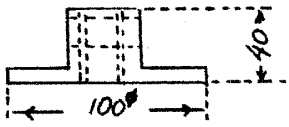
Item #	Pieces	Nomenclature of material	Sketch #	Type of material	Weight	Remarks
		Carried forward:		Steel	445.0	
24	2	Steel sheeting 140 x 8 - 280 as 14 - 23	63015	37.21	4.4	Template
25	2	- " - 160 x 6 - 250	"	"	5.0	"
26	1	Cushion (bed) 70 x 35 - 180	63031-7	37.11	2.7	
27	1	- " - 68 x 25 - 180	" -8	37.11	1.7	
28	1	Cylindrical beam-Diameter 20 length 350 Forged	63031-11	42.11	0.9	
29	2	Steel sheeting 120 x 8 - 80 with slot	63031-9	37.21	1.0	Template
30	2	Channel iron NP 18 cm - 67mm - 160 mm	63015	37.12	7.3	
31	2	Choice of either: Angle iron 150 x 64 x 10 or 150 w x 100 h x 10 dia - 160 l	"	"	6.3	
32	2	Steel sheeting 290w x 6 t - 690 l	"	37.21	24.2	Template
33	1	- " - 100 x 6 - 140	"	"	0.7	"
34	1	- " - 100 x 6 - 200	"	"	0.9	"
35	3	- " - 120 x 6 - 150	"	"	1.8	"
36	1	- " - 100 x 6 - 300	"	"	1.4	"
37	2	Pins-Diameter 19- 30 lathed	"	34.13	0.2	
38	2	Angle iron 60 x 60 x 6-425	"	37.12	4.6	
39	2	Steel sheeting 150 x 6 - 160	"	37.21	2.2	Template
40	2	- " - 250 x 6 - 320	"	"	4.0	"
41	2	- " - 180 x 6 - 250	"	"	3.4	"
42	2	- " - 260 x 6 - 530	"	"	10.8	"
43	2	- " - 180 x 6 - 220	"	"	2.0	"
44	2	Angle iron 60 x 60 x 6 - 1120	"	37.12	12.6	
45	1	Steel sheeting 7 mm 300-390	63031-5	37.21	2.8	Template
46	1	- " - 18 mm 400x310	63031-4	"	13.8	"
47	2	- " - 25 mm Diameter 120 cut on lathe	"-12	42.11	3.2	
48	1	Cylindrical beam-Diameter 20 length 450 forged	63031-10	42.11	2.2	
49	2	- " - Diameter 40 lon 110	63015	50.11	2.2	
50	2	Steel sheeting 120 x 6 - 170	"	37.21	2.0	Template
51	2	- " - 110 x 8 - 565	"	"	7.8	"
52	1	- " - 80 x 6 - 160	"	"	0.5	"
					12.0	
		Total amount			589.0	Kg.

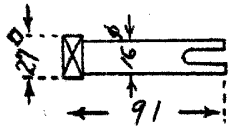
Bridge with Reinforcement
Sketch T 63016

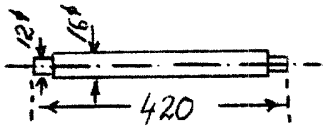
25X1A

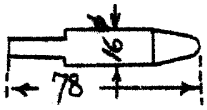
Sketch #	Pieces	Nomenclature	Sketch	Type of material	Weight	Remarks
63016 1	1	Material-Diameter 70 mm length 270 mm	63016	Quality Steel 50.11	2.65	Altogether 567 pieces. For one bridge: 192 pieces.
63016 3	1	Material Diameter 40 - length 100	"	37.11	0.15	Altogether 636 pieces. For one order: 212 pieces.
63016 4	1	Material Diameter 20 - length 80	"	37.11	0.10	- " -
63016 6	1	Material Diameter 70 x 30 length 400	"	50.11	2.00	Altogether 576 pieces. For one bridge: 192 pieces.
63016 8	1	Material Diameter 105 - length	"	50.11	1.18	- " -
63016 9	1	Material Diameter 16x420	"	42.11	0.30	- " -
63016 7	1	Material Diameter 25 mm x 5 mm	"	Steel 00.21	0.10	For 3 bridges To order ready-made 1500 pieces.
63016 2 ?	1	Countersunk head rivet Diameter 5 x 18	"	34.13	0.05	For 3 bridges 660 pieces.

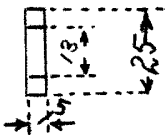


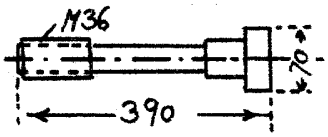


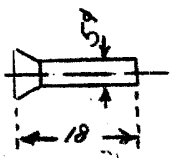












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25X1A

Clamping - hooked bolts

(Bolt with hook and nut)
Sketch T 63017

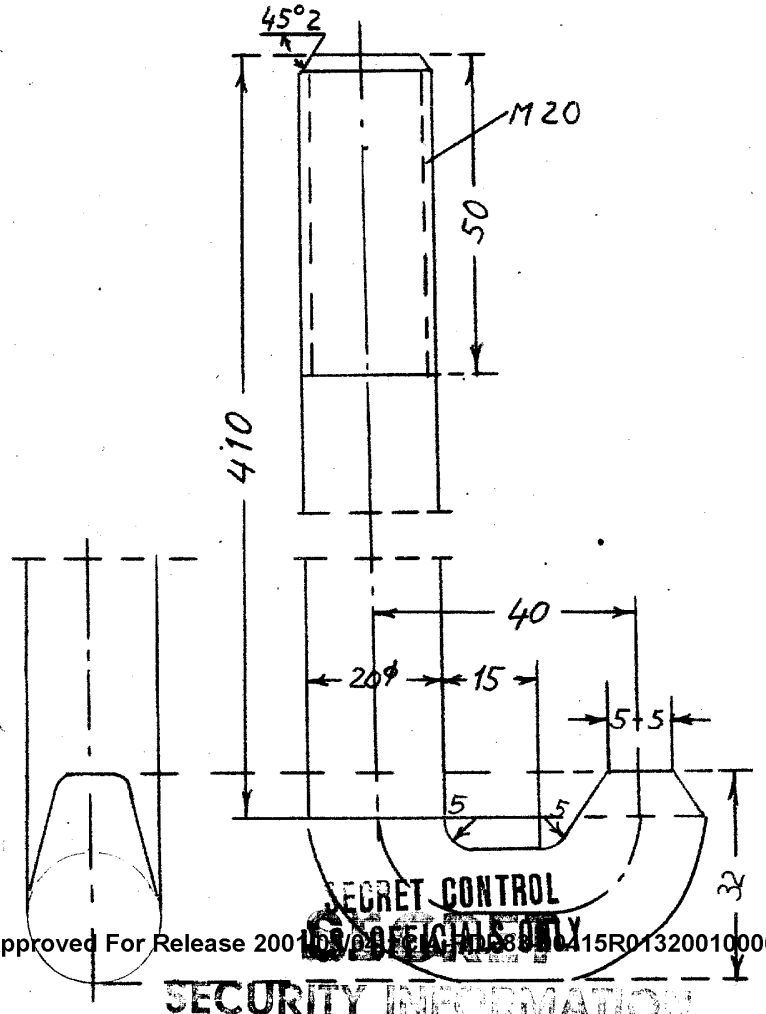
For one Bridge - 240 pieces
Made extra 256 "

Altogether: 720 pieces
768 "

Item #	Pieces	Nomenclature	Sketch #	Type of material	Weight	Remarks
1	1	Bolt with hook M 20 - 475 extension of length	63017	Steel 42.11	1.20	
2	1	Nut diameter 60 - length 30 M 20 threading	"	"	0.33	
3	1	Nut tightening handle, diameter 6.5/10/6.5- length 200	"	"	0.09	
4	2	Washers Diameter 7/17 - thickness 4	"	00.21	0.01	
					1.63 Kg.	

(Clamps wooden flooring to metal Bridge)

Washers are welded on end of nut tightening handle.



Clamping hooks for Launching Nose

Sketch T 63018

For one bridge: 52 pieces

altogether: 156 pieces

Item #	Pieces	Nomenclature	Sketch #	Type of material	Weight
1	1	Lock-hooked bolt M 20 threading length 275	63018	Steel 42.11	0.70
2	1	Nut diameter 60, length 30 - M 20 threading	"	"	0.33
3	1	Nut tightening handle 6.6/106.6 length 200	"	"	0.09
4	1	Washer Diameter 7/17, 4 thickness	"	00.21	0.01
					1.13 Kg.

As in sketch 63017, only instead of measurements for 410 mm should be 210 mm

Clamps flooring on to the launching nose.

Washers are welded on end of the nut tightening handle.

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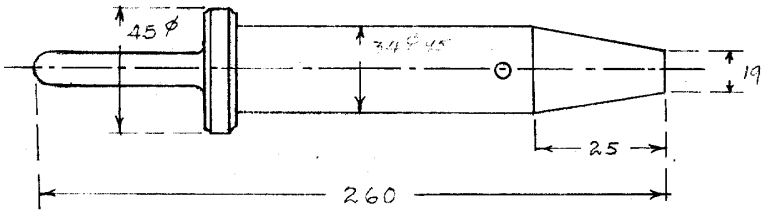
25X1A

PINS

Sketch T 63019

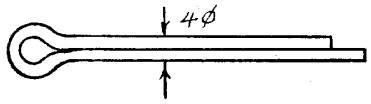


For one bridge: 84 pieces
altogether : 252 pieces

Weight: 1.49 Kg.

Material, diameter 50 x 265 L

Steel 50.11



Weight: 0.01 Kg

1 cotter - pin 4 x 50 length 94

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25X1A

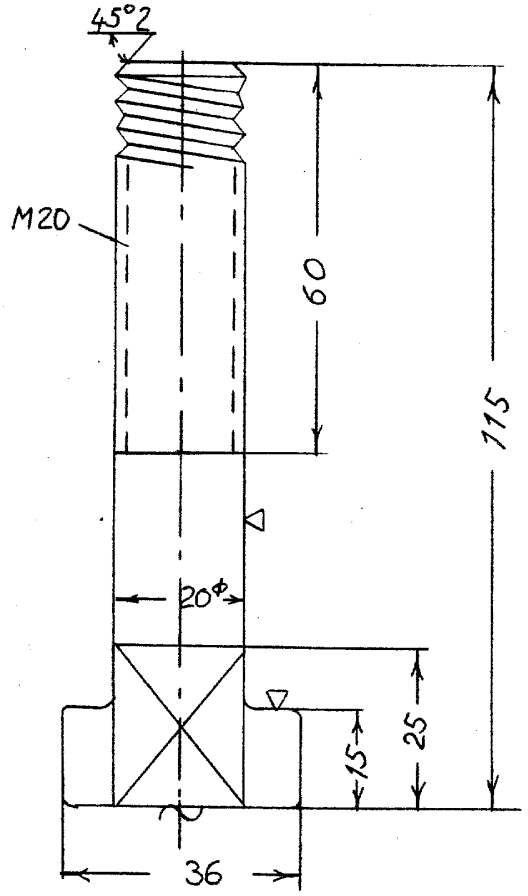
Hammer head bolt

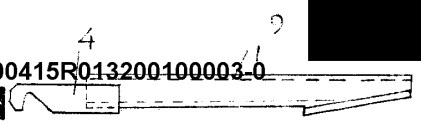
Sketch T 63020

For one Bridge: 20 pieces

altogether: 60 pieces

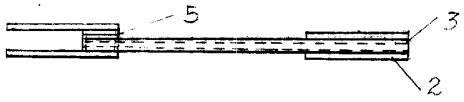
Item #	Pieces	Nomenclature	Sketch #	Type of material	Weight
1	1	Hammer head bolt from 36 . 20 See sketch	63020	Steel 50.11	0.40
2	1	Nut 63017 see 2-3-4 Diameter 60	63017	42.11	0.43
					0.83 Kg.





25X1A

Ramp



Sketch T 63021

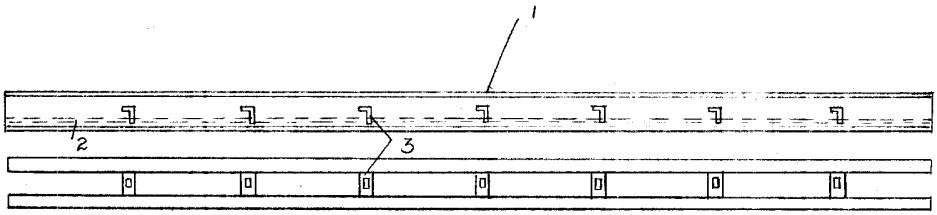
Item #	Pieces	Nomenclature	Sketch #	Type of material	Wieght	Remarks
1	1	Channel iron NP 14 cm - 1800 mm	63021	Steel 37.12	28.0	For one bridge: 64 pieces altogether: 192 pieces.
2	1	Band steel (bar) 70x6-440	"	"	1.5	
3	1	- " - 132 x 6 - 420	"	"	2.5	
4	2	- " - 120 x 14 - 300	"	"	4.0	
5	1	Channel iron 16 cm - 126 mm	"	"	2.8	

Sketch T 63021-1 - Cross member

1	2	Channel iron NP 10 cm-990 mm	63021-1	Steel 37.12	20.0	For one bridge: 8 pieces altogether: 24 pieces.
2	1	Band steel bar 120 x 20 - 195	"	"	3.0	
3	2	- " - 50 x 20 length 100	"	"	1.6	

Sketch T 63021-2 - Transom

1	2	Channel iron NP 14 cm - 4500mm	63021-2	Steel 37.12	144.0	For one Bridge: 16 pieces altogether 48 pieces.
2	1	Band steel 120 x 4 - 4500	"	"	17.0	
3	7	Angle iron 120x80x10-120	"	"	12.6	



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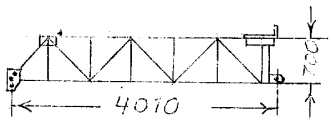
25X1A

Launching Nose - End Section

Sketch T 63022



For one bridge: 4 pieces
altogether : 12 pieces

Item #	Pieces	Nomenclature	Type of material	Weight	Remarks
			Steel		
1	2	Angle iron (bar) 75 x 75 x 8 - 3595	37.12	65.1	
2	2	- " - - " - - 3875	"	70.1	
3	2	- " - 65 x 100 x 7 - 370 (Right & left)	"	6.5	
4	3	- " - 35 x 35 x 4 - 770	"	4.4	
5	4	- " - - " - - 870	"	7.3	
6	2	- " - - " - - 730	"	3.1	
7	4	- " - - " - - 660	"	5.5	
8	1	Channel iron NP 18 cm - 610 mm	"	9.8	
9	3	Angle iron 35 x 35 x 4 - 550	"	3.5	
10	13	- " - - " - - 720	"	19.7	
11	1	- " - - " - - 655	"	1.4	
12	1	- " - - " - - 510	"	1.1	
13	2	Wedge shaped plates for inside channel iron 20 mm 80 x 70	"	1.4	
14	2	U Bolt Diameter 20 - 432	"	2.1	
15	4	Angle iron 75 x 75 x 8 - 605	"	21.8	
16	2	Channel iron NP 10 cm - 550 mm	"	11.7	
17	2	- " - - 570 mm	"	12.2	
18	2	Sheeting 6 mm 100 x 120	"	0.8	
19	2	- " - 8 mm 220 x 420	"	11.8	
20	2	- " - 8 mm 220 x 350	"	8.1	
21	2	- " - 8 mm 100 x 270	"	5.0	
22	2	- " - 8 mm 270 x 370	"	11.8	
23	2	Reinforcing plates 100 x 24 - 140	"	4.4	
24	2	- " - - " - 100 x 20 - 270 (Right & left)	"	6.5	
		25		6.0	
				303.0 Kg.	

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Approved For Release 2001/09/04 : CIA-RDP83-00415R013200100003-0

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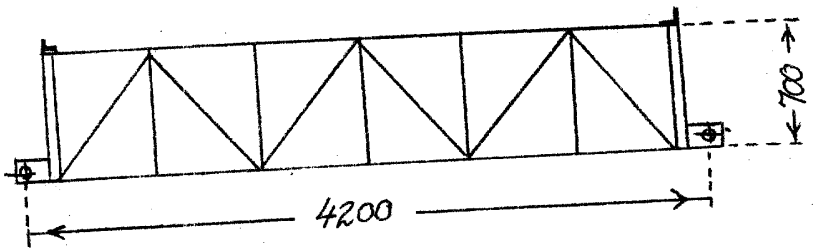
Launching Yoke - Center section

For one bridge: 4 pieces

altogether : 12 pieces

Item #	Pieces	Nomenclature	Type of material	Weight	Remarks
			Steel 37.12		
30	2	Angle iron 70 x 70 x 7 - 4130	"	61.7	
31	2	- " - - " - - 4070	"	60.2	
32	8	- " - 35 x 35 x 4 - 870	"	14.6	
33	4	- " - - " - - 710	"	6.0	
34	6	- " - - " - - 660	"	8.3	
35	4	Channel iron NP 10 cm - 540 mm	"	22.9	
36	2	- " - 18 cm - 610 mm	"	19.6	
37	14	Angle iron 35 x 35 x 4 - 720	"	21.2	
38	2	- " - - " - - 665	"	2.8	
39	4	- " - 40 x 120 x 10 - 270 (Right & left)	"	12.8	
40	2	- " - 80 x 120 x 10 - 270 used 35 x 35 x 4 - 550	"	2.3	
41	4	Corner plates, fastened by pins 8 mm 210 x 290 (Right & left)	"	19.3	
42	4	Plates for inside channel iron 20 mm. 80 x 70	"	2.8	
		2%		5.1	
				259.6 Kg.	



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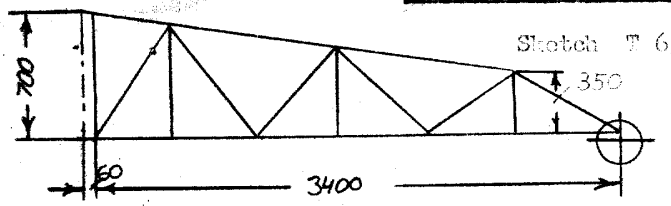
25X1A

Launching Nose - Forward Section



Sketch T 63023

For one bridge: 4 pieces

altogether : 12 pieces.

Item #	Pieces	Nomenclature	Sketch #	Type of material	Weight
50	2	Angle iron 70 x 70 x 7 - 4455 (Right & left)	63023	Steel 37.12	65.0
51	2	- " - 60 x 60 x 6 - 4076 (Right & left)	63023	"	43.6
52	2	- " - 35 x 35 x 4 - 700 (Right & left)	"	"	2.9
53	2	- " - - " - - 585	"	"	2.4
54	2	- " - - " - - 840 (Right & left)	"	"	3.5
55	4	- " - - " - - 740 (Right & left)	"	"	6.2
56	2	- " - - " - - 450	"	"	1.9
57	2	- " - - " - - 640 (Right & left)	"	"	2.7
58	2	- " - - " - - 315	"	"	1.3
59	3	- " - - " - - 550	"	"	3.3
60	1	Channel iron NP 18 cm - 610 mm	"	"	6.7
61	2	- " - 10 cm - 560 mm (Right & left)	"	"	11.8
62	2	Angle iron 35 x 35 x 4 - 650	"	"	2.8
63	13	- " - - " - - 720	"	"	19.7
64	2	- " - 60 x 60 x 6 - 570	"	"	6.3
65	2	Reinforcing sheeting 6 mm 180x180	"	37.21	4.1
66	2	- " - 6 mm 200x310	"	37.21	8.0
67	2	V-shaped plates 20 mm strip	63022	37.12	1.4
68	2	Cover plates strip 100 x 20 - 270 (Right & left)	63022	37.12	8.5
69	2	U Bolts, diameter 20 - 432	"	50.11	2.1

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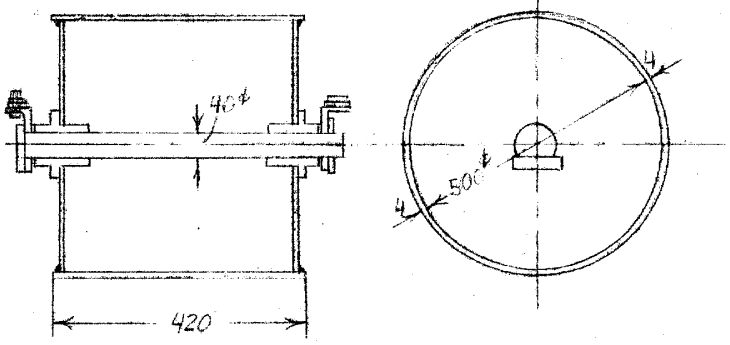
25X1A

Launching Nose Roller

Sketch T 63024



For one bridge: 4 pieces
Altogether : 12 pieces

Item #	Pieces	Nomenclature	Sketch #	Type of Material	Weight	Remarks
				Steel		
80	2	Angle iron 65 x 100 x 9 - 280	63024	37.12	6.2	
81	1	Clamping bar 30 x 16 - 60	"	"	0.1	
82	4	Hexagonal bolts with roughly made nuts M 16 x 35	"	4 D	0.1	
83	1	Roller shaft diameter 40/60-502	"	50.11	5.0	
84	1	Shaft clamp, roughly made. Diameter 42/75-6 mm * D I N 126	"	37.13	-	
85	2	Shaft Bearing. Diameter 70/100 60 also (Diameter 105)	"	50.11	3.1	
86	2	Washer, diameter 500-4 mm sheet	"	37.21	10.2	
87	1	Steel sheeting wrapper 4 mm 420 - 1582	"	37.21	21.3	
88	2	Nut washers, roughly made 18 * D I N 126	"	37.12	-	
89	1	Cotter pin 6 x 60 - *D I N 94	"	"	-	
		2%			1.0	
					47.0 Kg.	

Remarks: * D I N "Deutsche Industrie Norm" (German Industrial Specification)

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25X1A

Guide Rollers

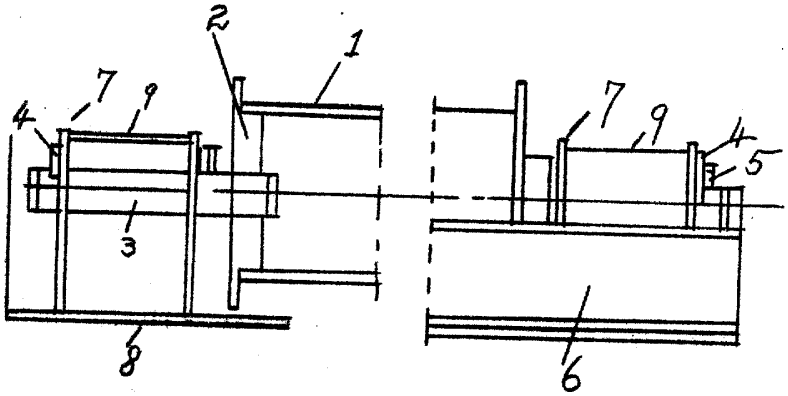
Sketch T 63025

For one bridge: 36 pieces

altogether : 108 pieces

Item #	Pieces	Nomenclature	Sketch #	Type of material	Weight	Remarks
1	1	Roller steel. Diameter 168 mm length 1050 from a pipe 168 x 5 * D I N 2448	63025	Steel 35.20	21.1	
2	2	Flange, diameter 220- (from diameter 230)	"	42.11	4.9	
3	2	Axle, Diameter 50-length 190 (from diameter 60)	"	50.11	5.8	
4	2	Axle clamp 8 mm. 35 x 85	"	00.11	1.4	
5	4	Bolts M 12 x 35	"	4 D	0.2	
6	2	Channel iron, IP 10 cm length 1386	"	37.12	29.4	
7	4	Axel Support plates 8 mm 180 x 240	"	37.21	2.6	
8	2	Base plate 4 mm 260 x 400	"	"	5.5	
9	2	Axel support tie plate 4mm 100 x 273	"	"	1.7	
					80.8 Kg	

Remarks: * D I N "Deutsche Industrie Norm" (German Industrial Specification)



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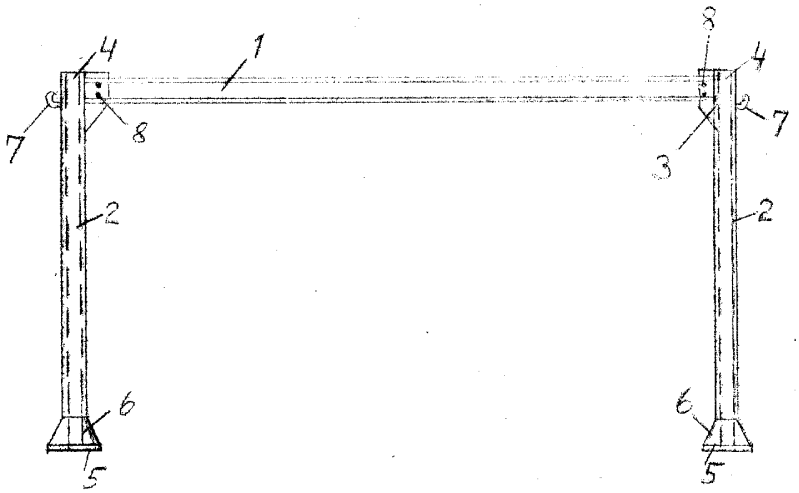
25X1A

Assembly Frame with Chain Fall

Sketch T 63026

For one bridge: 4 pieces
Altogether : 12 pieces

Item #	Pieces	Nomenclature	Sketch #	Type of Material	Weight	Remarks
				Steel		
1	1	I-beam NP 22 cm height length 4850 mm	63026	37.12	151.0	
2	2	Pipes 133 mm Dia x 4 gage length 4360 mm. (Possibly smaller pieces can be used).	"	45.29	110.5	
3	4	Reinforcing plates 115 x 450 x 4	"	37.21	4.8	
4	2	- " - 145 x 254 x 4	"	"	1.6	
5	2	- " - 360 x 360 x 4	"	"	7.7	
6	8	- " - 180 x 180 x 4	"	"	4.6	
7	4	Hook, diameter 20 length 250 Forged	"	50.11	2.5	To be bent
8	4	Bolts, diameter 25-45-34	63019	50.11	6.0	
					289.5 Kg.	



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25X1A

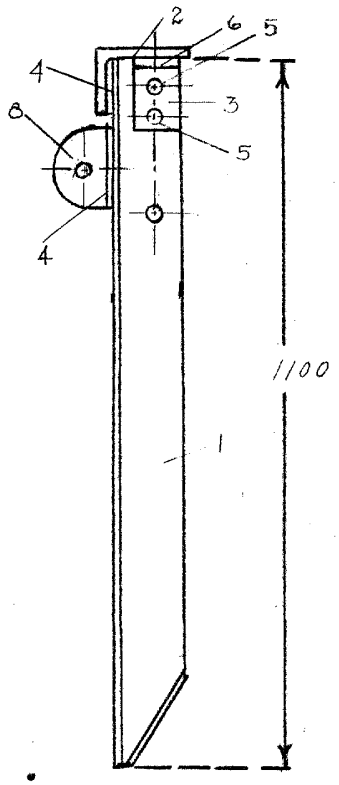
Anchor Stake for Assembly Frame and Land Operated Winches

Sketch T 63027

For one bridge: 64 pieces
Altogether : 192 pieces

Item #	Pieces	Nomenclature	Sketch	Type of Material	Weight	Remarks
1	1	I-beam NP 22 cm length 1100 mm	63027	Steel 37.12	14.7	
2	1	Angle plate 120 x 80 x 10 length 140	"	"	2.0	
3	2	Angle plate 120 x 65 x 10 length 80 (Made of the angle plate 120 x 80 x 10)	"	"	1.8	
4	1	Base plate 60 x 8 length 98	"	"	0.5	
5	4	Rivets, half round 16 x 55 * D I N 124	"	34.13	0.4	
6	2	Rivets, half round 16 x 30 * D I N 124	"	"	0.1	
7	4	Rivets, half round 16 x 50 * D I N 124	"	"	0.4	
8	1	I-beam NP 22 cm, length 1100 mm (98 x 88) dimensions of cross section	"	37.12	1.1	

Remarks: * D I N "Deutsche Industrie Norm" (German Industrial Specification)



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25X1A

Turn Buckle

Sketch T 63028

For one bridge: 16 pieces
Altogether : 48 pieces

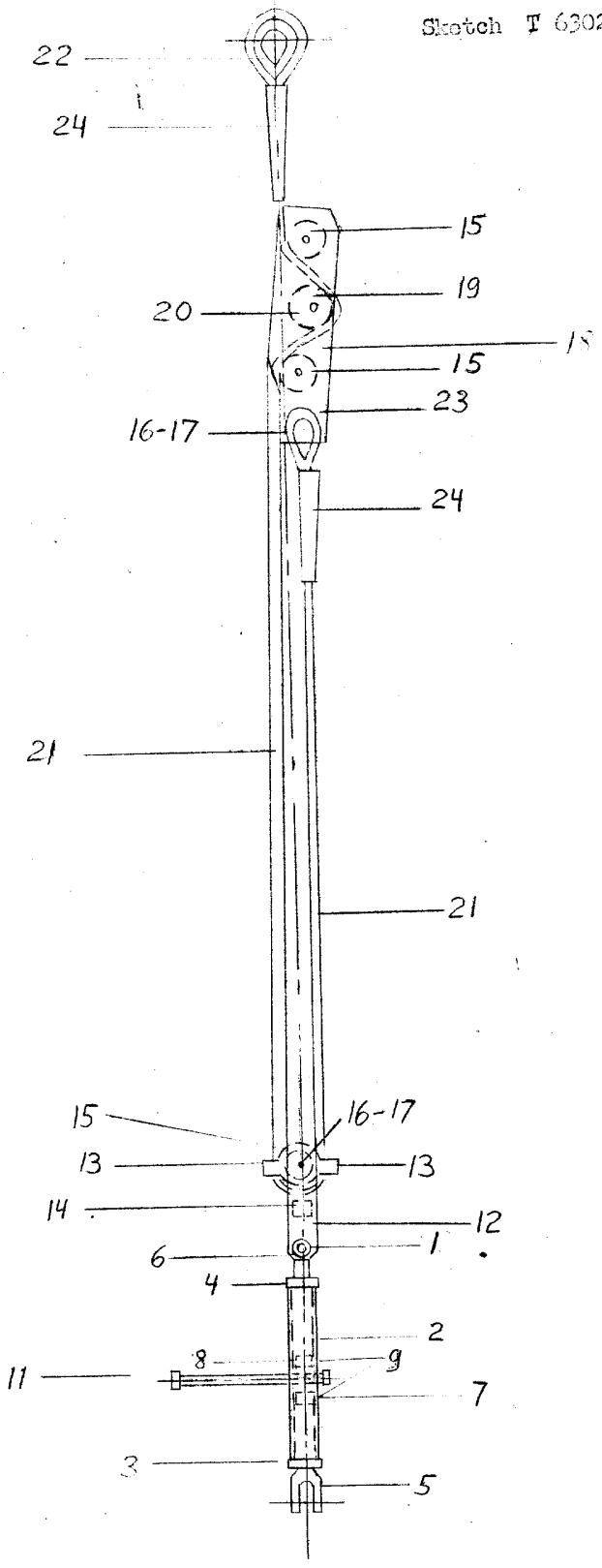
Item #	Pieces	Nomenclature	Sketch #	Type of Material	Weight	Remarks
				Steel		
1	1	Locking nut	63016-2	42.11	0.30	
2	1	Tubing, Dia 40 x 4 - length 310	63028	"	1.00	
3	1	Collar M 20 - threading right	"	"	0.21	
4	1	- " - left	"	"	0.21	
5	1	Outside fork M 20 - threading left	"	37.12	0.45	
6	1	Inside - " - right	"	37.12	0.45	
7	1	Inside anchor collar, diameter 26, 10 M 12 threading left	"	42.11	0.05	
8	1	Inside - " - threading right	"	"	0.05	
9	2	Cotter pins 4 x 20 * D I N 94	"	"	0.07	
10	1	Turn buckle, diameter cap 6.5/10/6.5 - length 220	"	"	0.13	
11	2	Washers, diameter 7/17, 4 mm	"	00.12	0.01	
12	2	Reinforcing band, 40 x 4 - 175	"	42.11	0.50	
13	2	Reinforcing clamps for # 12 30 x 4 - length 130	"	"	0.16	
14	1	Guard plate 30 x 30 x 26	"	"	0.14	
15	3	Shive wheel 100-width 25 from diameter 105	"	"	3.00	
16	2	Shive axle 22/16 - length 50 (from diameter 35)	"	"	0.20	
17	2	Cotter pins 3 x 25 * D I N 94	"	"	0.02	
18	2	Slide plates 370 x 100 x 4	"	"	2.40	
19	1	Shive 100-width 24 (from diameter 105)	"	"	0.90	
20	3	Hexagonal bolts, M 12 x 50 with nuts * D I N 601	"	4 D	0.30	
21	1	Cable 12.5 mm length 7750 * D I N 655	"		4.06	
22	1	Eyelet	"	42.11	0.18	
23	1	Shive 74, width 24 (from diameter 80)	"	"	0.50	
24	1	Wire wrapping 1 mm, diameter - length 25 meters	"		0.16	
		Welded ends			15.60 Kg.	

Remarks: * D I N "Deutsche Industrie Norm"(German Industrial Specification)

25X1A

Turn Buckle Device

Sketch T 63028



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25X1A

Counter Balance Frame

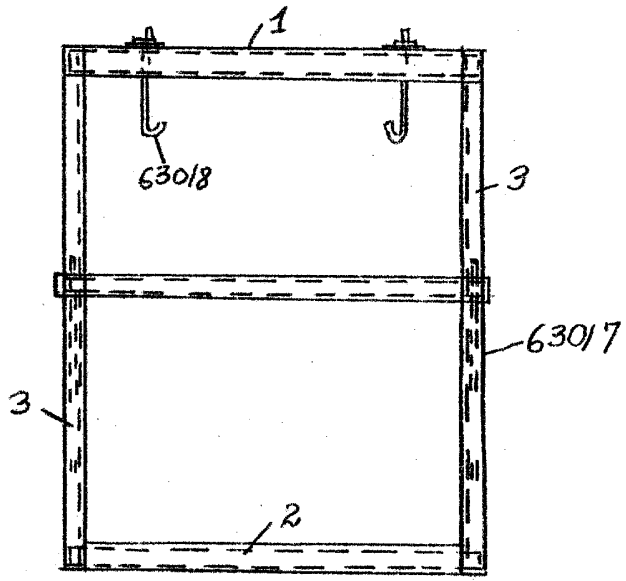
Sketch T 63029

For one bridge: 8 pieces
Altogether : 24 pieces

Item #	Pieces	Nomenclature	Sketch #	Type of Material	Weight	Remarks
1	1	Channel iron NP 10 cm length 1340 mm	63029	Steel 37.12	14.2	
2	1	- " - - " - - 1340	"	"	14.2	
3	2	Angle iron 60 x 60 x 6 - 1660 (Right & Left)	"	"	20.0	
4	1	Tubing 42 x 4 - length 1380 * D I N 2448	"	35.29	4.9	
					53.3 Kg.	

Remarks: * D I N "Deutsche Industrie Norm" (German Industrial Specification)

To be used when constructing the bridge.



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25X1A

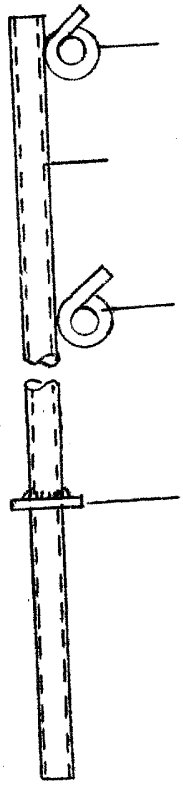
Uprights for Guard Rail for Bridge Deck

Sketch T 63030

For one bridge: 208 pieces
Altogether : 624 pieces

Item #	Pieces	Nomenclature	Sketch #	Type of Material	Weight	Remarks
1	1	Tubular steel 30 x 2.5 Length 1140 * D I N 2448	63030	Steel 35.29	1.9	
2	2	Round steel, diameter 12 Length 350	"	37.12	0.4	
3	1	Washers, diameter 70 Thickness 8 mm with opening diameter 31 (from diameter 70)	"	"	0.2	
					2.5 Kg.	

Remarks: * D I N "Deutsche Industrie Norm" (German Industrial Specification)



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Welding Plan and Work Sequence

For the steel structure, order # 1621/4

Item #	Item description & part number	Sketch #	Template #	Remarks
	III. Center and end section structure	T 63022		
1.	# 10 reinforcing steel plates, left and right. Part # 35 and 41.	T 63022	T 63046	Cut to fit template and weld.
2.	# 10 reinforcing steel plates, left and right. Part # 17 and 21.	T 63022	T 63047	-"-
3.	Angle iron and reinforcing plates left and right. Part # 3 and 22. Drill holes, diameter of 35 after welding.	T 63022	-	Welded without use of template.
4.	Left and right lattice truss center section. Parts mentioned in Par 1 (# 35 and # 41) and separate parts # 30, 31, 32, 33, 34 and 39.	T 63022	T 63037	Cut to fit template and weld.
5.	Center section of the structure assembly. Parts mentioned in Par 1 and separate parts # 37, 38, 39 and 40.	T 63022	T 63037	-"-
6.	Corner plates (angle iron)			
	a) Part # 36 and 42	T 63022	-	Weld without use of template.
	b) " 8 " 15	"	-	
	c) " 60 " 67	T 63023	-	

ENCLOSURE (D)

Item #	Item description & part number	Sketch #	Template #	Remarks
7.	Upper corner plates (angle iron). Parts mentioned in Par # 6 a,b, and c from the center section, end section and final edge.	T 63022 T 63023	T 63045	Cut to fit template and weld.
8.	Left and right lattice truss end section. Parts mentioned in Par # 2 (# 17 and 21). Par # 3 (#3 and #22). Separate parts # 1,2,4,5,6,7,9,15,19,20 and 24.	T 63022	T 63037	-"-
9.	End section of the structure assembly. Parts mentioned in Par # 8,10 (# 14 and # 16) and separate parts # 9 and 10.	T 63022	T 63037	-"-
10.	# 10 reinforced steel plates and eyelet. a) similar to Part # 14, 16, and 18. b) similar to Part # 14 and 16.	T 63022	T 63060	-"-
11.	Joint reinforcing plate, part 23, 11 and others must be welded to the end section by using the proper template.	T 63022	T 63053	-"-
12.	Reinforcing plates # 11 and other parts # 61 and 65.	T 63023	T 63047	-"-
13.	Launching nose tip and U bolts # 64 and 69.	T 63023	-	Weld without use of template.
14.	Left and right lattice truss of the end-section of the structure. Parts mentioned in Par 12 and separate Parts # 50,51,52,53,54,55,56,57,58, 66 and 68.	T 63023	T 63037	Cut to fit template and weld.
15.	End section of structure assembly. Parts mentioned in Par # 14, 13 and separate parts # 59, 62, 63.	T 63023	T 63037	-"-
16.	Hoisting frame and chain fall Parts # 2,3, and 4.	T 63026	T 63037	-"-
17.	Hooks for the hoisting frame and chain fall. Parts # 2 and 7.	T 63026	T 63051	-"-
18.	Steel reinforcing plates and angles. Parts # 3 and 22, left and right.	T 63022	T 63059	Using the drilling machine in the template, drill the following holes. Diameter 10 to be partially drilled, diameter 35 to be drilled thru. The 10 mm hole is used as starter.

25X1A

Welding Plan and Work Sequence

"Steel structure" Order #1621/4

Item #	Item description & part number	Sketch #	Template #	Remarks
	I. Center section of truss T 63014 a			
1.	Reinforcing steel plates. Part # 14,16, and 19.	T 63014 a	T 65036	Adjust in template and weld.
2.	Lower reinforcing plate Part # 23 and 26. - T 63031/8	T 63014 a T 63031/8	T 63039	-"-
3.	Interlocking end section, male and female Part # 23, 25. - T 63031/7	T 63014 a T 63031/7	T 63039	-"-
4.	Lower end section. Parts mentioned in Par 1 (14,16,19) and parts # 11,17,22	T 63014 a	T 63040	Adjust to the template. Select one part of the structure and inspect it very closely and then use it as a control gauge.
5.	Upper end section Parts mentioned in Par 2 (23 and 26) Parts mentioned in Par 3 (23 and 25) and parts # 12,24,27,28.	T 63014 a	T 63041	-"-
6.	# 18 reinforcing steel plate. Parts 1 and 18.	T 63014 a	T 63032	Adjust to template and weld it completely
7.	# 18 reinforcing steel plates. Parts # 1, 20 and 21.	T 63014 a	T 63035	Adjust to template and weld.
8.	# 14 reinforcing steel plates. Parts # 2 and 3.	T 63014 a	T 63033	-"-
9.	# 14 reinforcing steel plates Parts # 2, 20, and 21.	T 63014	T 63034	-"-

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25X1A

Item #	Item description & part number	Sketch #	Template #	Remarks
10.	Center part of the lower section of the truss. Parts mentioned in Par 4,8, and 9 and steel parts # 6, 7, and 15.	T 63014 a	T 63042	Adjust to template. Assembly part must be thoroughly checked and then it may be used as control gauge for the template.
11.	Center part of the upper section of the truss. Parts mentioned in Par 5,6, 7 and separate parts # 7 and 8.	T 63014 a	T 63043	-"-
12.	Center part of the structure assembly. Parts mentioned in Par 10. Lower section of the truss. Parts mentioned in Par 11. Upper section of the truss and separate parts # 3,4,5,9, and 10.	T 63014 a	T 63044	-"-
	II. End-section of the truss T 63015 a			
13.	Reinforcing steel plates Parts # 17, 20, and 45.	T 63015 a	T 63036	Adjust to the template and weld.
14.	Interlocking section and reinforcing plate. Parts # 24, 27 - T 63031/8	T 63015 a T 63031/8	T 63039	-"-
15.	Interlocking section and reinforcing plate. Parts # 24, 26 - T 63031/7	T 63015 a T 63031/7	T 63039	-"-
16.	Lower connecting section. Parts mentioned in Par 13 (17,20,45) and parts # 12,18,23.	T 63015 a	T 63040	-"-
17.	Right upper connecting section. Parts mentioned in Par 14 (24,27). Parts mentioned in Par 15 (24,25) and parts # 13,25,29 and 33.	T 63015 a	T 63041	-"-
18.	Left upper connecting section. Parts # 13,5,39, 50 and 51 and also with the angular connection. Control.	T 63015 a	T 63052	Adjust to template, 656 + 1 measurement must be followed.

Item #	Item description & part number	Sketch #	Template #	Remarks
19.	# 18 reinforcing plates, left and right. Parts # 1, 40 and 42. Sheets of part # 32 must be welded without the fitting.	T 63015 a	T 63054	Adjust to template and then weld completely. Measurement 140 of part 32 must be followed.
20.	# 14 reinforcing plates, left and right. Parts # 2, 41 and 43.	T 63015 a	T 63054	-"-
21.	# 18 reinforcing plates, left Part # 1 and 36.	T 63015 a	T 63058	Adjust to template and weld.
22.	# 18 reinforcing plates Parts # 1 and 21.	T 63015 a	T 63058	-"-
23.	# 18 part # 1, 18 part 30 and part 31. Parts 30 and 31 to be drilled through.	T 63015 a	T 63055	Do not use template.
24.	# 10 reinforcing plates. Parts # 4, 34,35,50. Also with the angular connection part # 48.	T 63015 a	T 63056	Adjust to template and weld.
25.	# 14 and reinforcing plates, left side. Parts # 2,21,22, and 52.	T 63015 a	T 63057	Place in template.
26.	# 14 and reinforcing plates, right side. Parts # 2, 21, and 22.	T 63015 a	T 63057	-"-
27.	End-section of the lower section of the truss. Parts mentioned in Par 13,16,20,25, and 26 and separate parts # 46,6 and 7. Part # 7, the two inside ones must be welded.	T 63015 a	T 63042	Adjust to template.
28.	End-section of the upper section of the truss. Parts mentioned in Par 14,15,17,18,19,21,22,23,24,25,26 and separate parts # 7,44,47,49.	T 63015 a	T 63043	Place in template. Part # 47 measurements are 610 + 1. Part # 49 measurements is 18, which must be followed.
29.	End-section of the structure assembly. Parts mentioned in Par 27, lower section of truss. Parts mentioned in Par 28, upper section of truss, and separate parts # 9,10,11,14,15,16,18 and 1 angle, part 7.	T 63015 a	T 63044	Place in template.

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S P E C I F I C A T I O N S

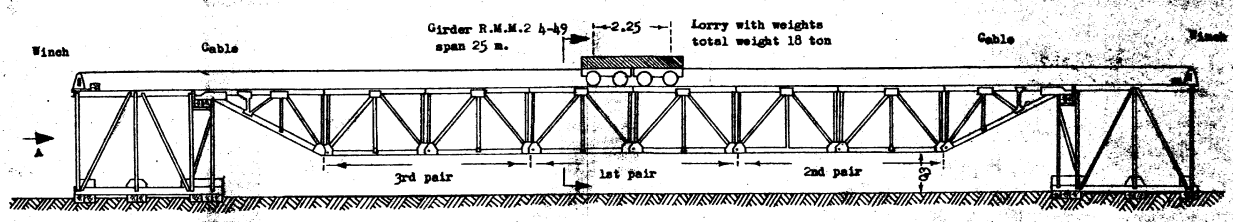
Materials Required to Build the Metal Structure

b

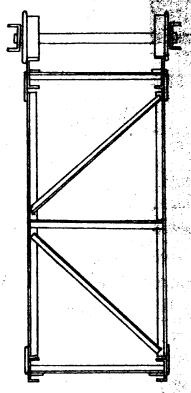
Material nomenclature		Type of steel	Quantity	
			Meters	Kilograms
		Steel		
Angle iron	35 x 35 x 4	37.12	5640	13,800
	60 x 60 x 6	-"-	3100	19,700
	70 x 70 x 7	-"-	370	2,740
	75 x 75 x 8	-"-	594	6,200
	90 x 90 x 9	-"-	1728	22,500
	65 x 100 x 7	-"-	9	105
	65 x 100 x 9	-"-	9	117
	80 x 120 x 10	-"-	120	2070
	100 x 150 x 10	-"-	36	810
Channel beam	NP 10	-"-	1660	20,000
-"-	NP 14	-"-	3078	58,600
-"-	NP 18	-"-	2161	55,200
Iron I - beam		-"-	210	7,600
		Steel		
Round iron beam	10 mm	42.11		168
	12 "	37.12		360
	16 "	42.11		700
	20 "	50.11	50	125
	20 "	42.11		1,570
	20 "	37.11	70	175
	25 "	00.12		89
	30 "	42.11		556
	40 "	37.12		284
	40 "	50.11	27	270
	50 "	50.11		1,800
	60 "	-"-		500
	60 "	42.11	42	1,000
	70 "	50.11		7,770
	105 "	42.11		2,000
	105 "	50.11	32	2,200
	260 "	42.11		4,400
Sheet iron	100 x 20	37.12		595
	100 x 24	-"-		100
	70 x 30	-"-		2,000
	70 x 30	50.11		4,800

Material nomenclature		Type of steel	Quantity	
			Meters	Kilograms
		Steel		
Sheet iron	120 x 14	37.12		780
	120 x 4	-"-		1,100
	80 x 40	-"-		2,288
	40 x 26	-"-	28	230
	36 x 20	50.11	12	72
		Steel		
Plate	4 mm	42.11		574
	4 "	37.11		1,500
	5 "	-"-		3,580
	6 "	-"-		6,300
	7 "	-"-		2,150
	8 "	-"-		11,596
	18 "	-"-		14,000
	20 "	-"-		5,755
	35 "	-"-		750
		Steel		
Pipes	40 x 4	42.11	18	40
	42 x 4 ? 2448	35.29	42	180
	133 x 4 ? 2448	45.29	128	1,800
	30 x 2.5 ? 2448	35.29	856	1,700
	168 x 5 ? 2448	65.29	140	2,700
Wire Diameter 1 mm			1,200	8
Cable Diameter 12.5 ? 655				
48 pieces. as length 7750 mm			672	150
Cable eye 12.5 mm			48 piec.	20
Rivets Diameter	19 x 30		232 "	18
	16 x 30		450 "	24
	16 x 50		900 "	76
	16 x 55		900 "	85
Sunk rivets Diameter	5 x 18		660 "	2.5
Cotter pins Diameter	4 x 50 ? 94		400 "	22
	6 x 60		20 "	0.3
	3 x 25		110 "	0.25
Bolts M 16 x 35 with nuts			60 "	6
M 12 x 50 - " -			170 "	11
M 12 x 25 without nuts			500 "	17
Washers Diameter 42-75	6 mm.		12 "	2
	M 16		24 "	0.40
Diameter 7/17	4 mm.		2,000 "	10
Diameter 25/13	5 mm.		1,500 "	21
				298,252-45

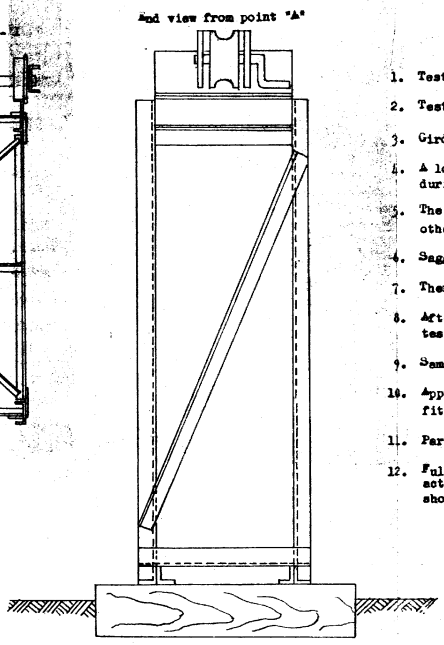
PLAN NO I



Cross-section I - I



End view from point "A"



INSTRUCTION AND ORDER OF TESTING OF GIRDERS

1. Testing of girders determined on 2 pillars (supports). (See plan).
2. Tested girders are assembled of 6 intermediate and 2 end sections, which total length is 25.0 m.
3. Girders tested by static weights totaling 18 tons.
4. A lorry, total weight of 18 tons, is rolled from one end to the other with the help of winch; during movement of the lorry, girders are tapped with a hammer weighing 400 gr.
5. The lorry must be left in center of the girder for 30 minutes and then it must be moved to the other end of fixed stand.
6. Saggings are measured in compliance with No 3 BB of technical agreements.
7. Then testings are made once again.
8. After first pair of intermediate girders are tested they are interchanged with second pair and testing is repeated.
9. Same type of testing is done with second and third pair of intermediate girders.
10. Appearance of slopes (or bumps) within welded joints in basic metal, and also forcing the fitting of connecting girders is not permitted.
11. Particular attention must be given to condition of lower connecting bolts.
12. Full process of testing on interchangeability of girders in compliance with p.p. 8 and with actual instruction is conducted, and upon satisfactory results of testing only one girder should be tested upon receiving the first lot of girders.

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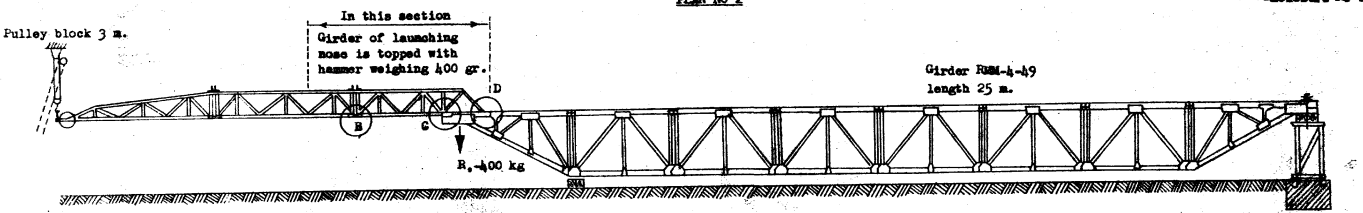
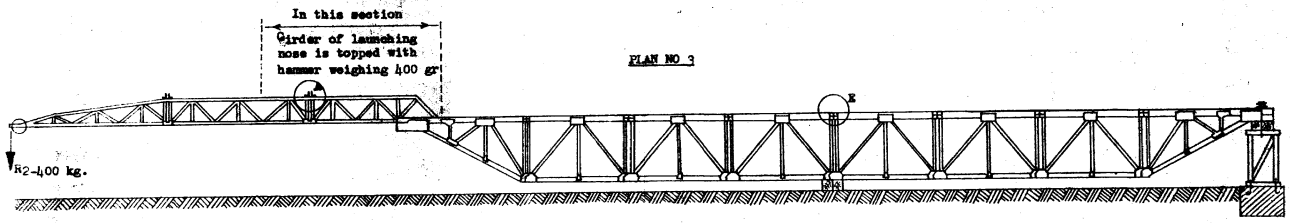
PLAN NO 2

Inclosure No 2



PLAN NO 3



INSTRUCTIONS PERTAINING TO PLAN NO 2

1. Every launching nose which is brought for delivery undergoes testing for durability of connecting joints C, D and B.
2. Near the end of the girder is hung the weight R,-400 kg.
3. The girder with assistance of hoist R = 3 m is lifted by the end of the launching nose to height of 10-15 cm from intersection of support and held in this position for 10 minutes.
4. Testings repeated 5 times.
5. After three processes of elevation, middle section of launching nose is shifted and connected to adjacent sections of other ends.
6. During first and last elevations, girder of launching nose of section which is affixed with basic girders of the bridge is topped with a hammer weighing 400 gr.
7. Upon discovery of flaws within welded joints, or within basic parts of metal, launching nose is rejected.

INSTRUCTIONS PERTAINING TO PLAN NO 3

1. Launching nose and girder undergo testings to determine sturdiness of flanged joint connections of upper girder A and E.
2. With the assistance of the hoist a weight R-400 kg is hung, and sustained for 30 minutes at the end of the launching nose. At the same time structure near joints A and E is tapped with hammer weighing 400 gr.
3. The weight is removed and after an interval of 15 minutes, the process is repeated.
4. After testing there should be no distortion in joints A and E. Should distortion be present, and also upon discovery of flaws (cracks) within the welded joints or in the (basic) structure itself, the material is condemned.

25X1A

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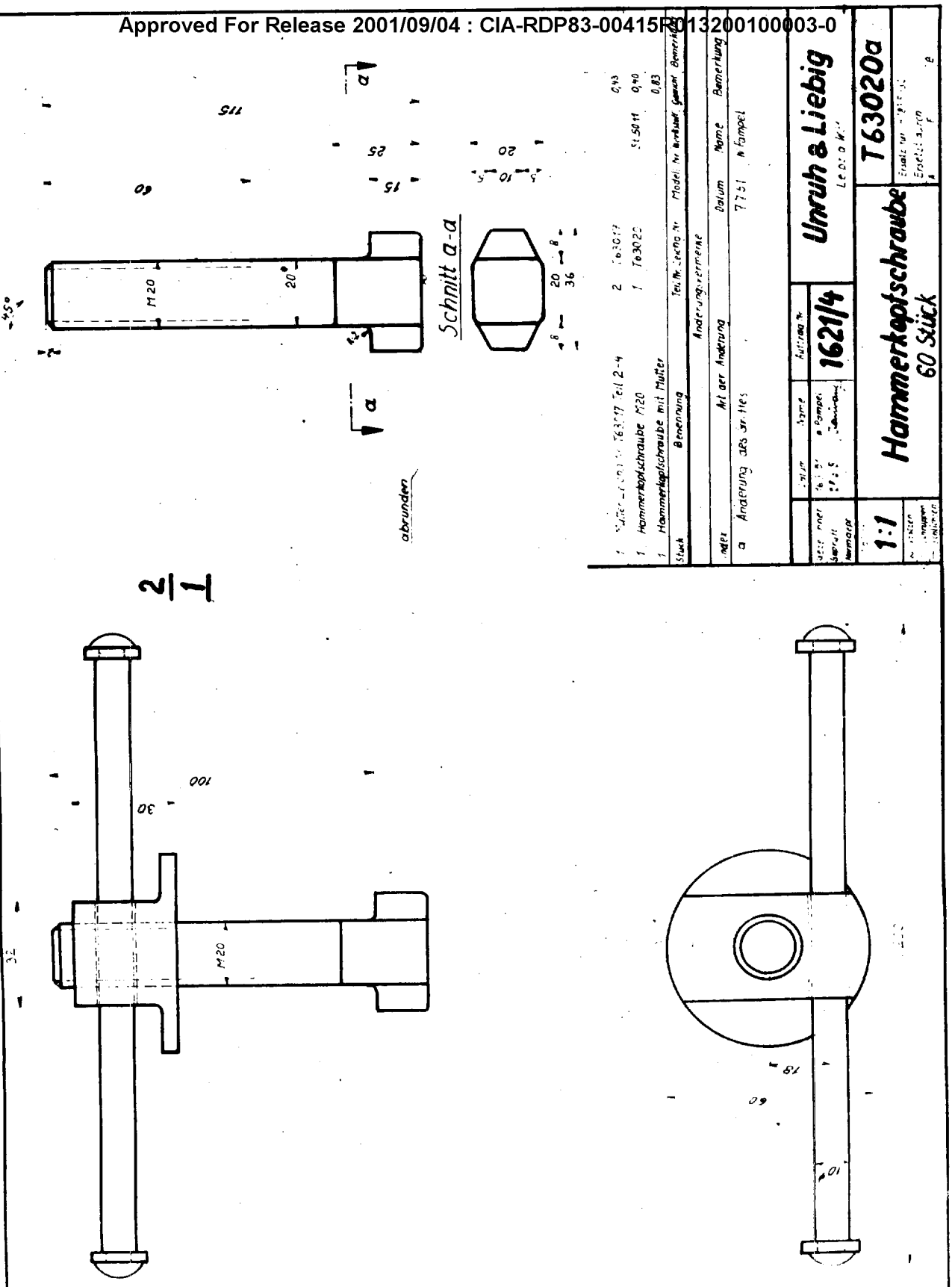

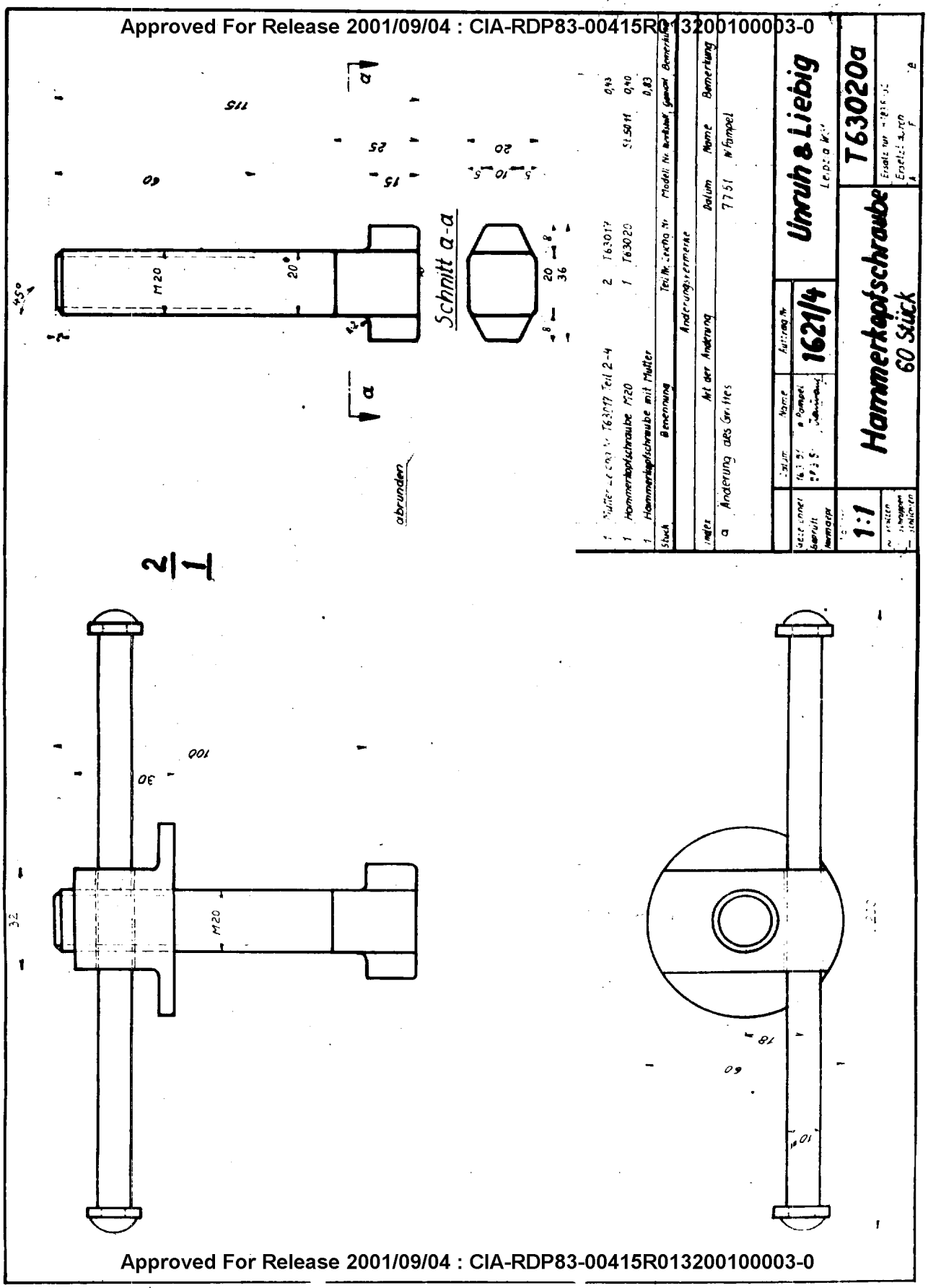

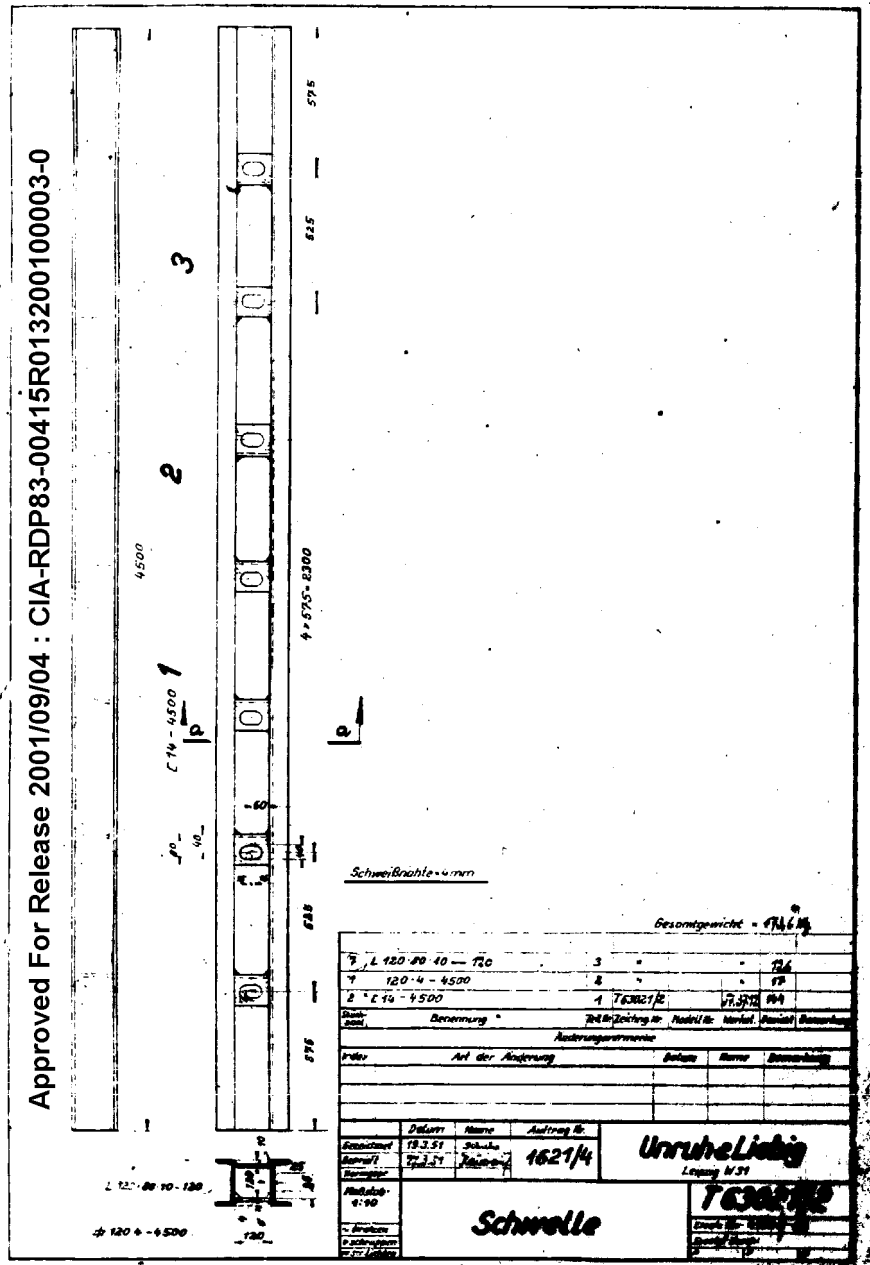

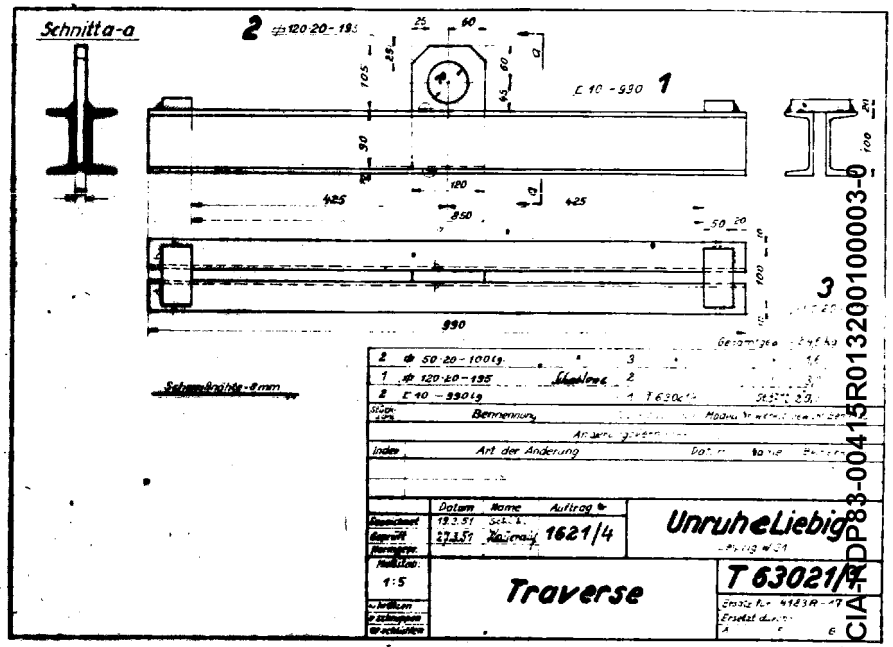

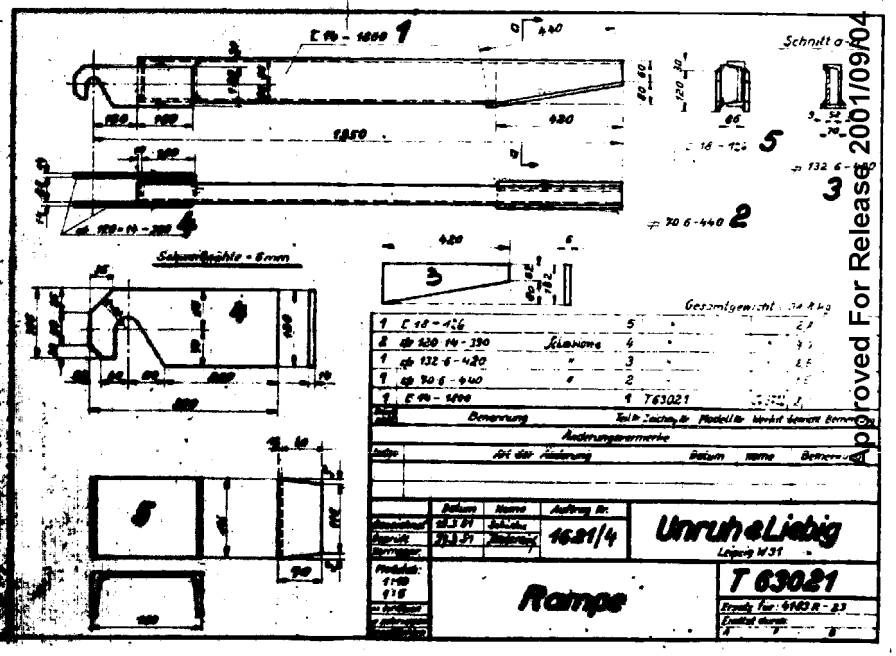

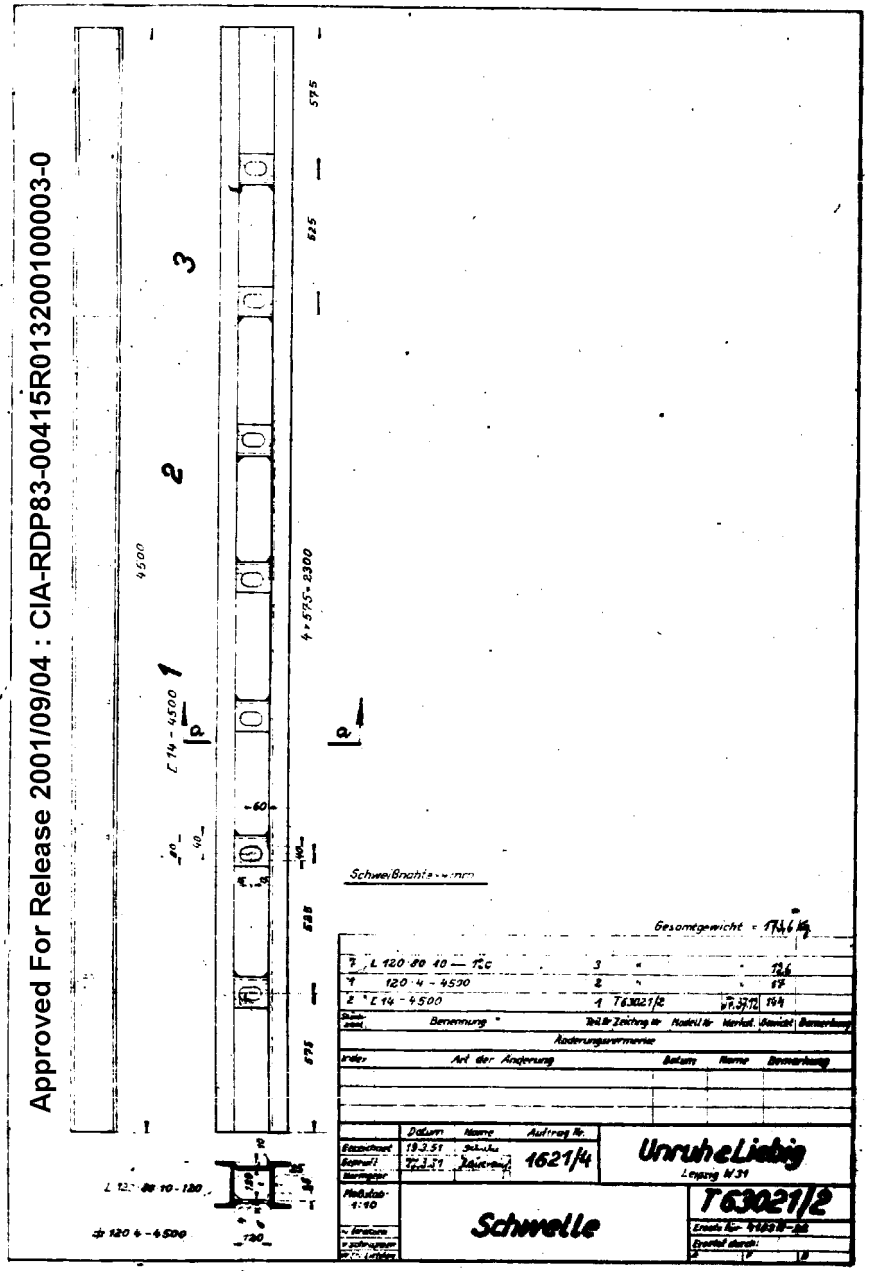

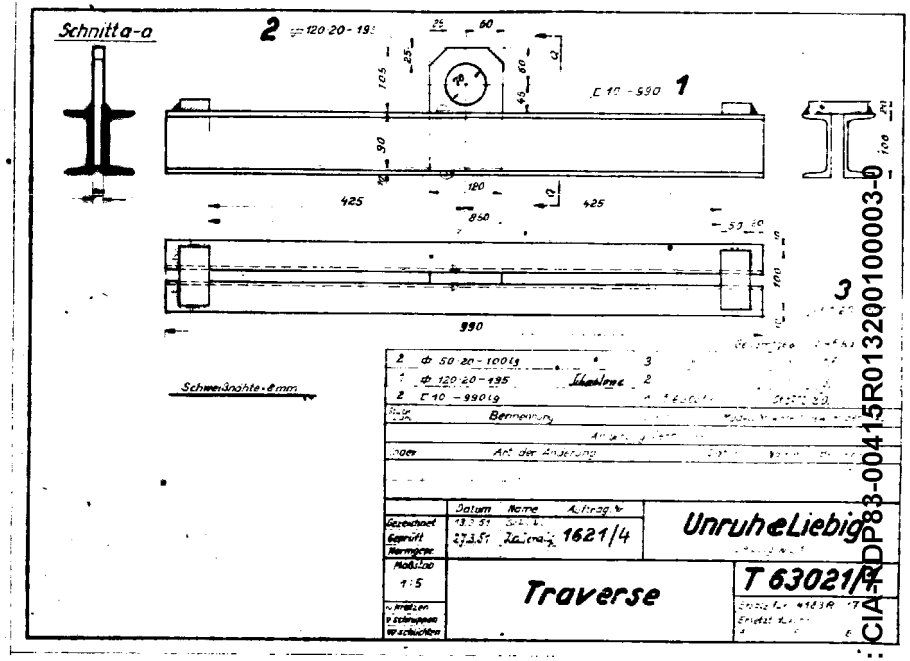

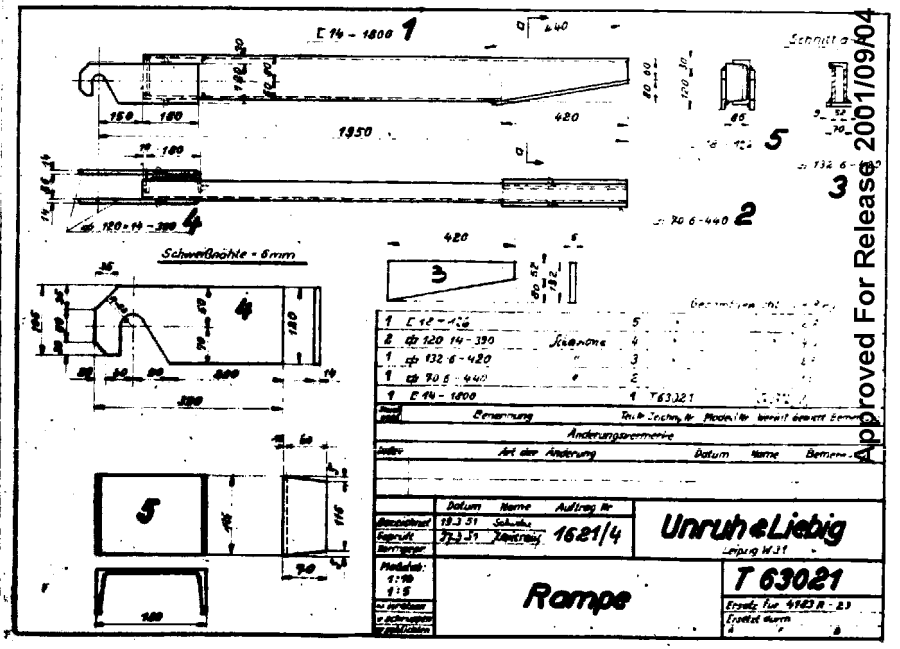

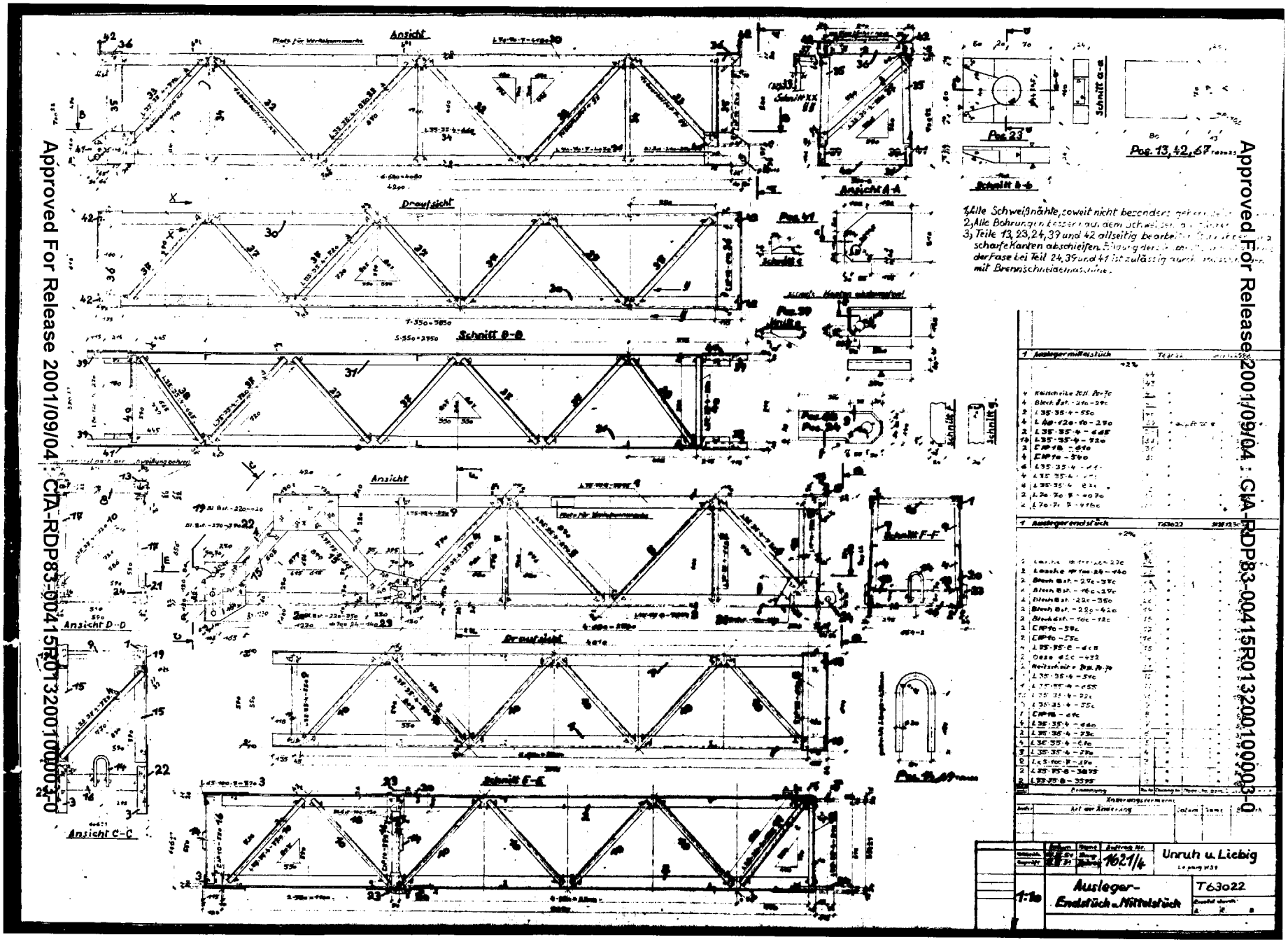

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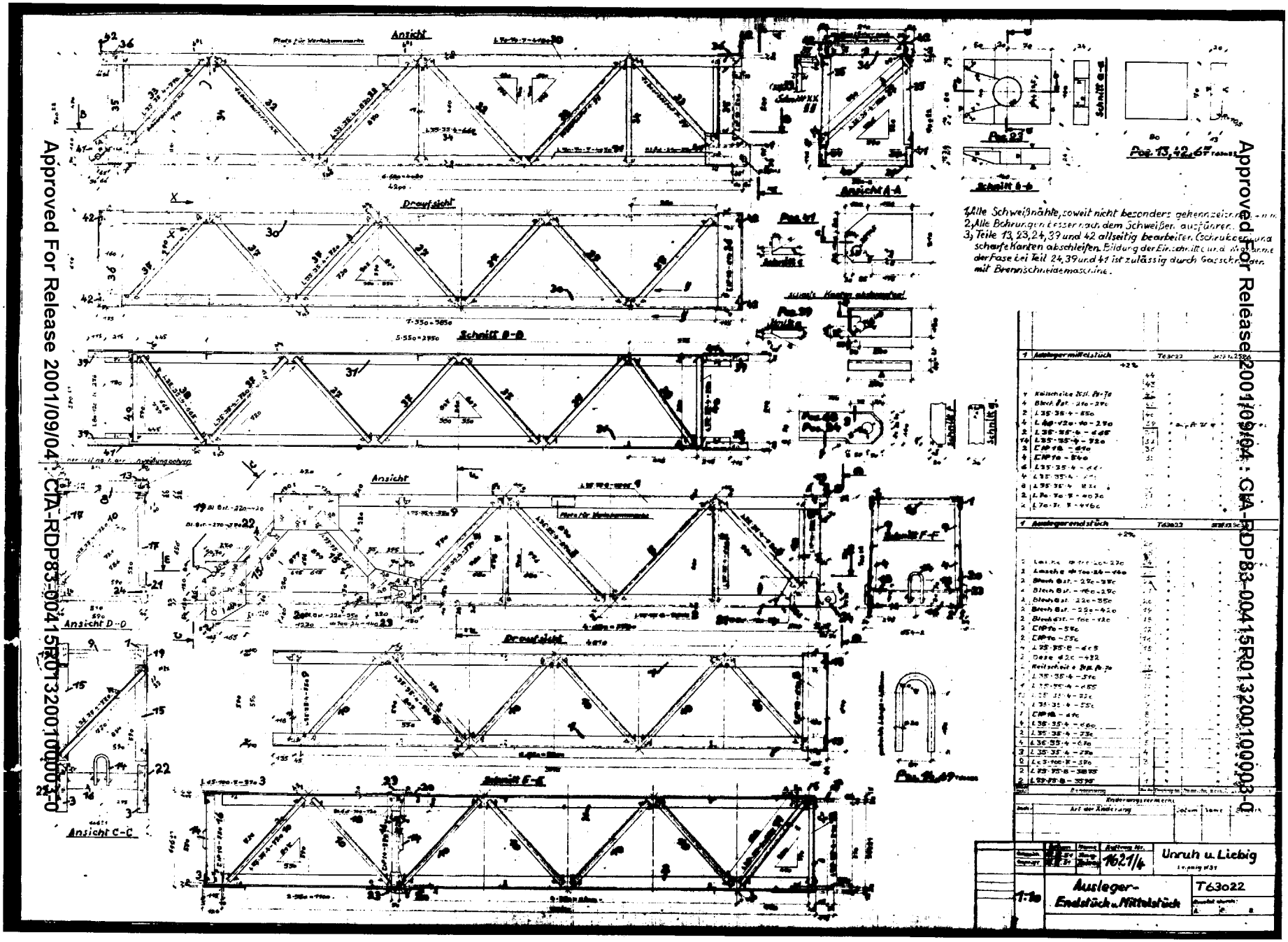

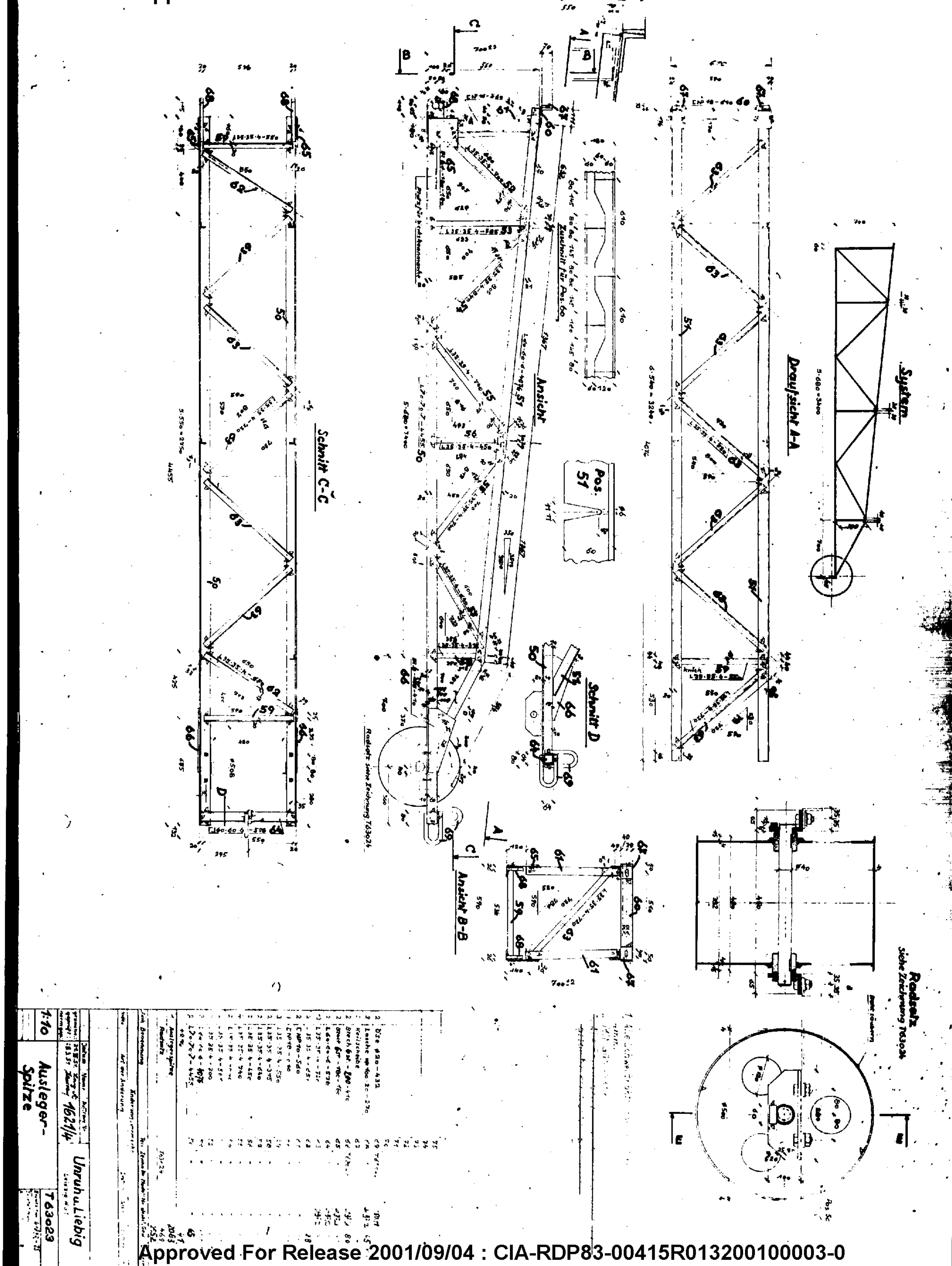

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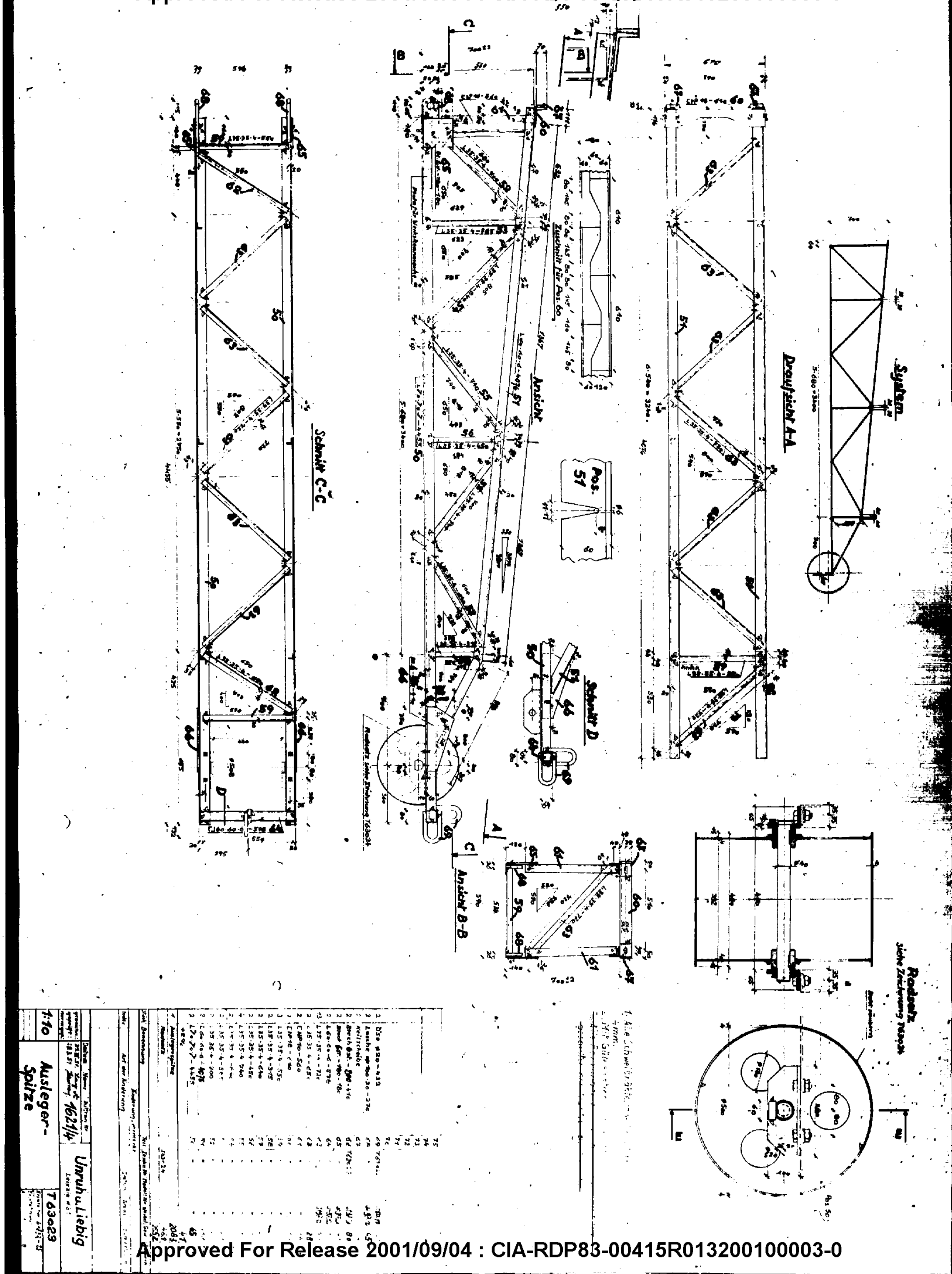

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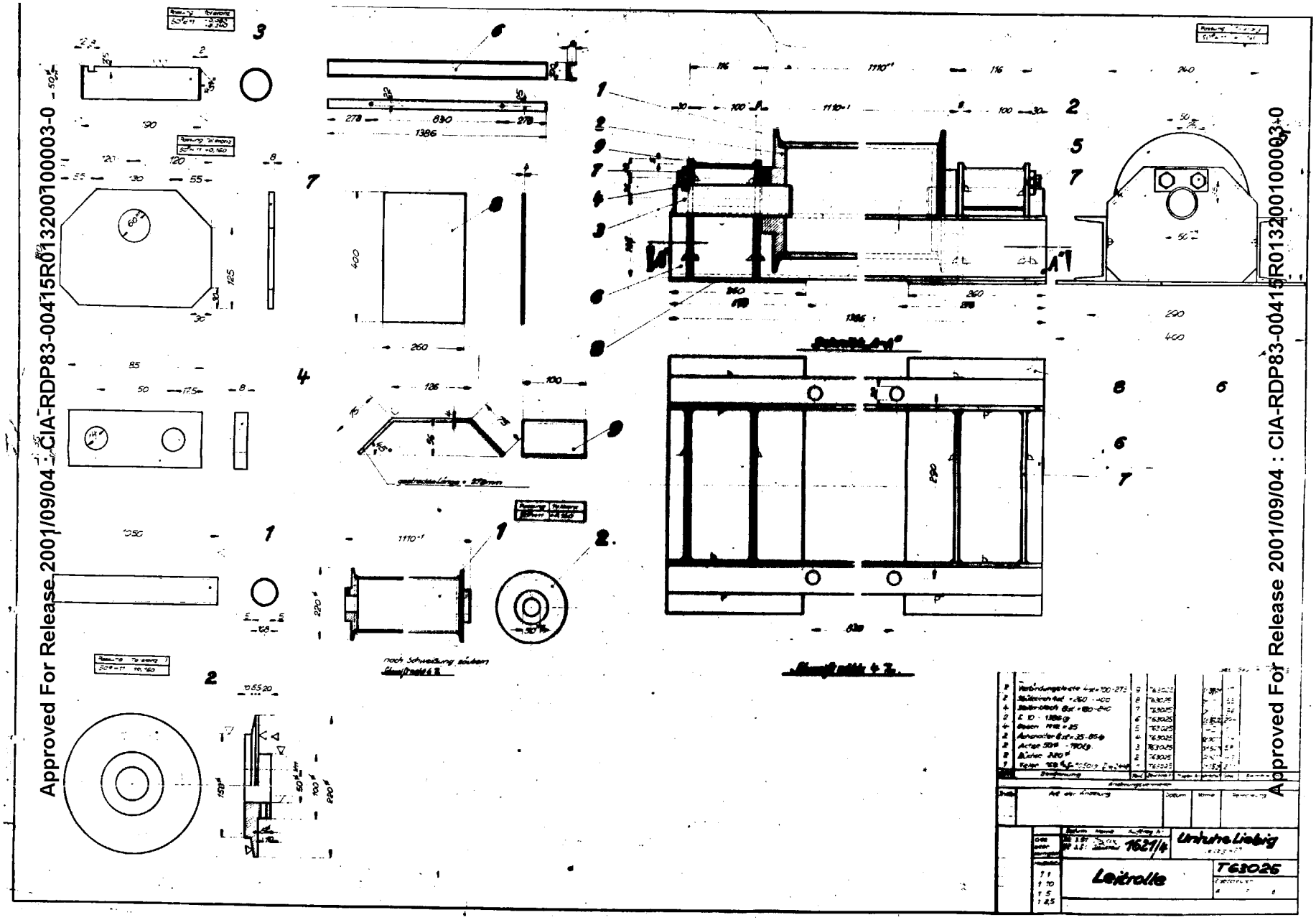

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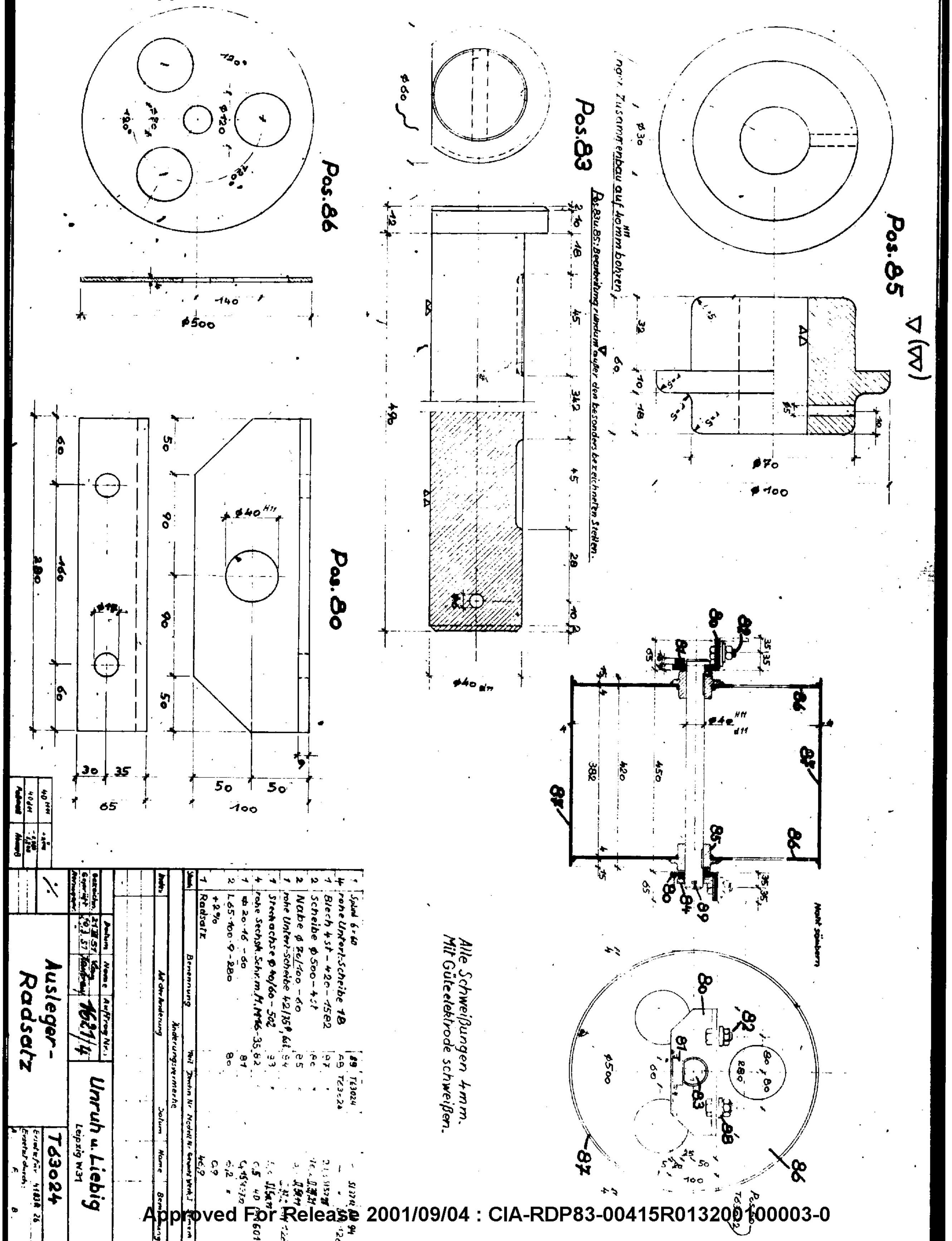

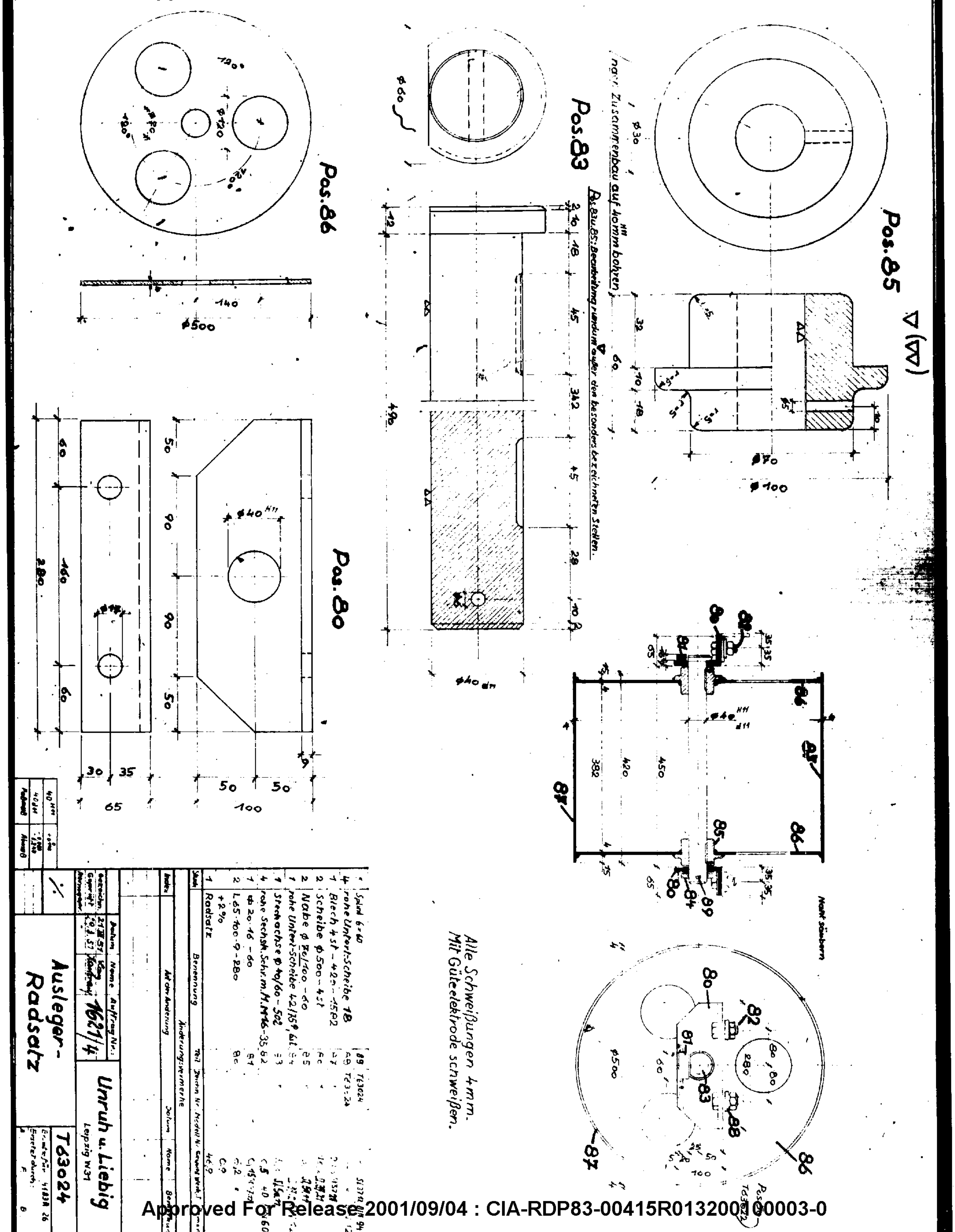

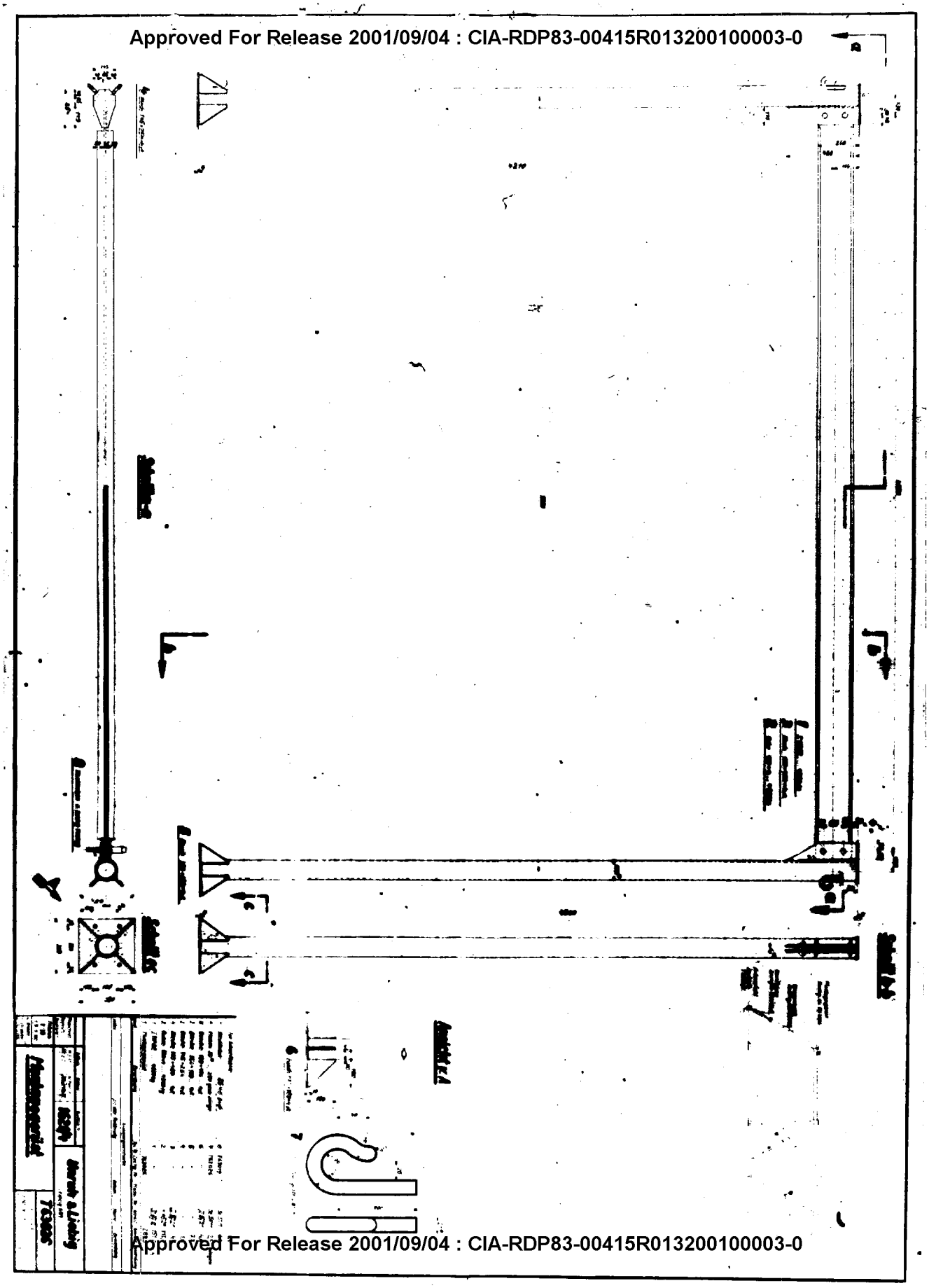

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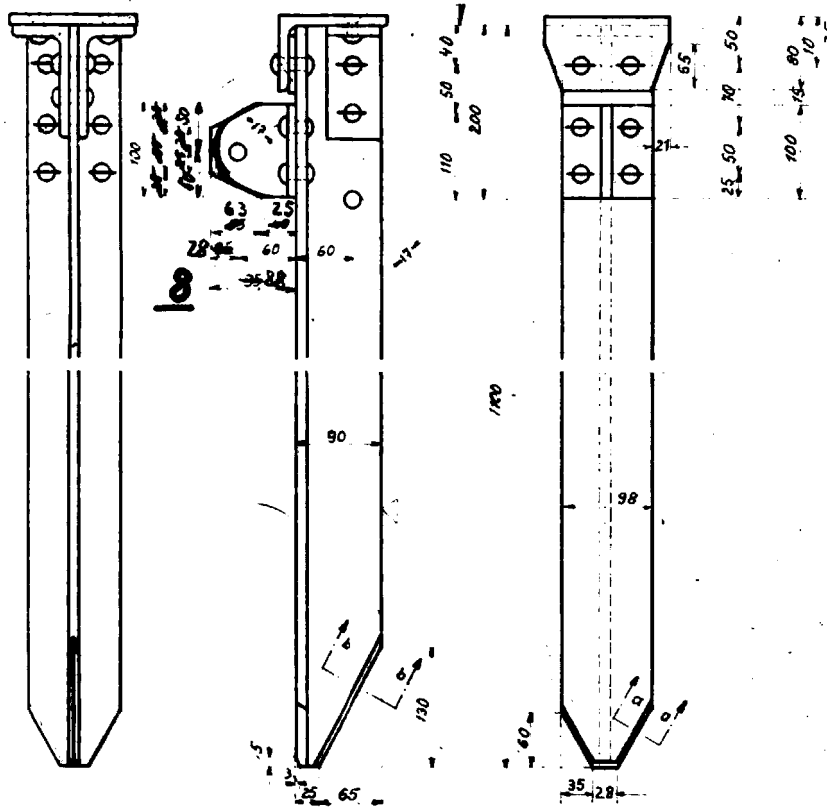
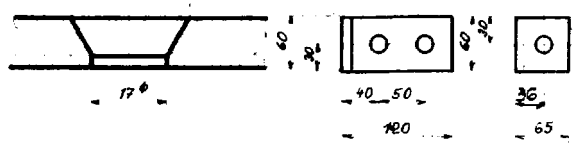


Lochbearbeitung in Teil 2 für Senkschließkopf!

2 3



Flanschabschneiden

Stück	Benennung	Teil-Nr./Zeichn. Nr.	Modell Nr.	Werkst.	Gewicht	Bemerkung
1	Halbes I 22 .... 100 lg [98 × 90	8	T63027	St 37.12	1,1	
4	Halbrundniete 16 × 50	7	DIN 124	St 34.13	1,4	
2	" 16 × 30	6	"	"	0,1	
4	" 16 × 55	5	"	"	0,4	
1	Futter 60×8 .... 98 lg	4	T63027	St 37.12	0,5	
2	L 120×65×10 .... 60 lg [aus L 120×80×10]	3	"	"	1,8	
1	L 120×80×10 .... 140 lg	2	"	"	2,0	
1	Halbes I 22 .... 1100 lg [98 × 90]	1	"	"	14,7	
1	Ankerpfahl		T63027		21,0	

Änderungsvermerke

Index	Art der Änderung	Datum	Name	Bemerkung

	Datum	Name	Auftrag Nr.
Gezeichnet	20.3.51	W. Pompe	1621/4
Geprüft	27.3.51	Jaworski	
Normgeprüft			

Maßstab 1:5 1:1

~ ätzen
▽ schruppen
▽▽ schlichten

Unruh & Liebig
Leipzig W 31

Ankerpfahl
192 Stück

T63027

Ersatz für 4183 R 2-
Ersetzt durch
A B

Approved For Release 2001/09/04 : CIA-RDP83-00415R013200100003-0

6 2 4 5

I 22 genau rechtwinklig sägen

Lochbearbeitung in Teil 2 für Senkschließkopf!

2 3

Flanschabschneiden

Schnitt a-a

Schnitt b-b

Stück	Benennung	Teil Nr. Zeichg. Nr.	Modell Nr.	Werkst.	Gewicht	Bemerkung
1	Halbes I 22 .... 100 lg [98 × 90	8	T63027	St 37.12	1,1	
4	Halbrundniete 16 × 50	7	DIN 124	St 34.13	0,4	
2	" 16 × 30	6	"	"	0,1	
4	" 16 × 55	5	"	"	0,4	
1	Futter 60×8 .... 98 lg	4	T63027	St 37.12	0,5	
2	L 120×65×10 .... 60 lg [aus L 120×80×10]	3	"	"	1,9	
1	L 120×80×10 .... 140 lg	2	"	"	2,0	
1	Halbes I 22 .... 1100 lg [98 × 90]	1	"	"	14,7	
1	Ankerpfahl		T63027		21,0	

Änderungsvermerke

Index	Art der Änderung	Datum	Name	Bemerkung

	Datum	Name	Auftrag Nr.
Gezeichnet	20.3.51	Pompe.	1621/4
Geprüft	27.3.51	Kaiser	
Normgepr.			

Unruh & Liebig
Leipzig W 31

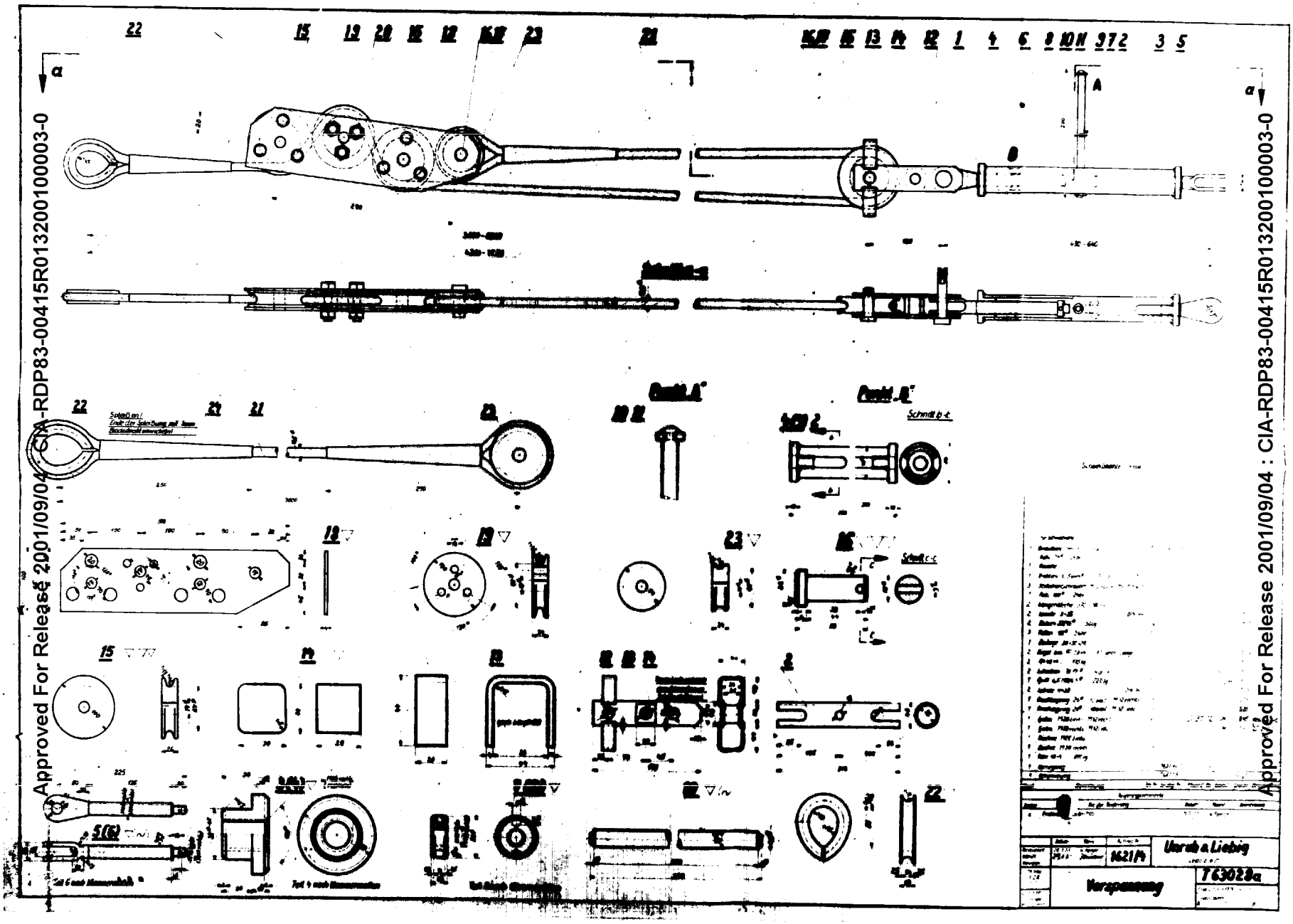
Maßstab 1:5 1:1

Ankerpfahl
192 Stück

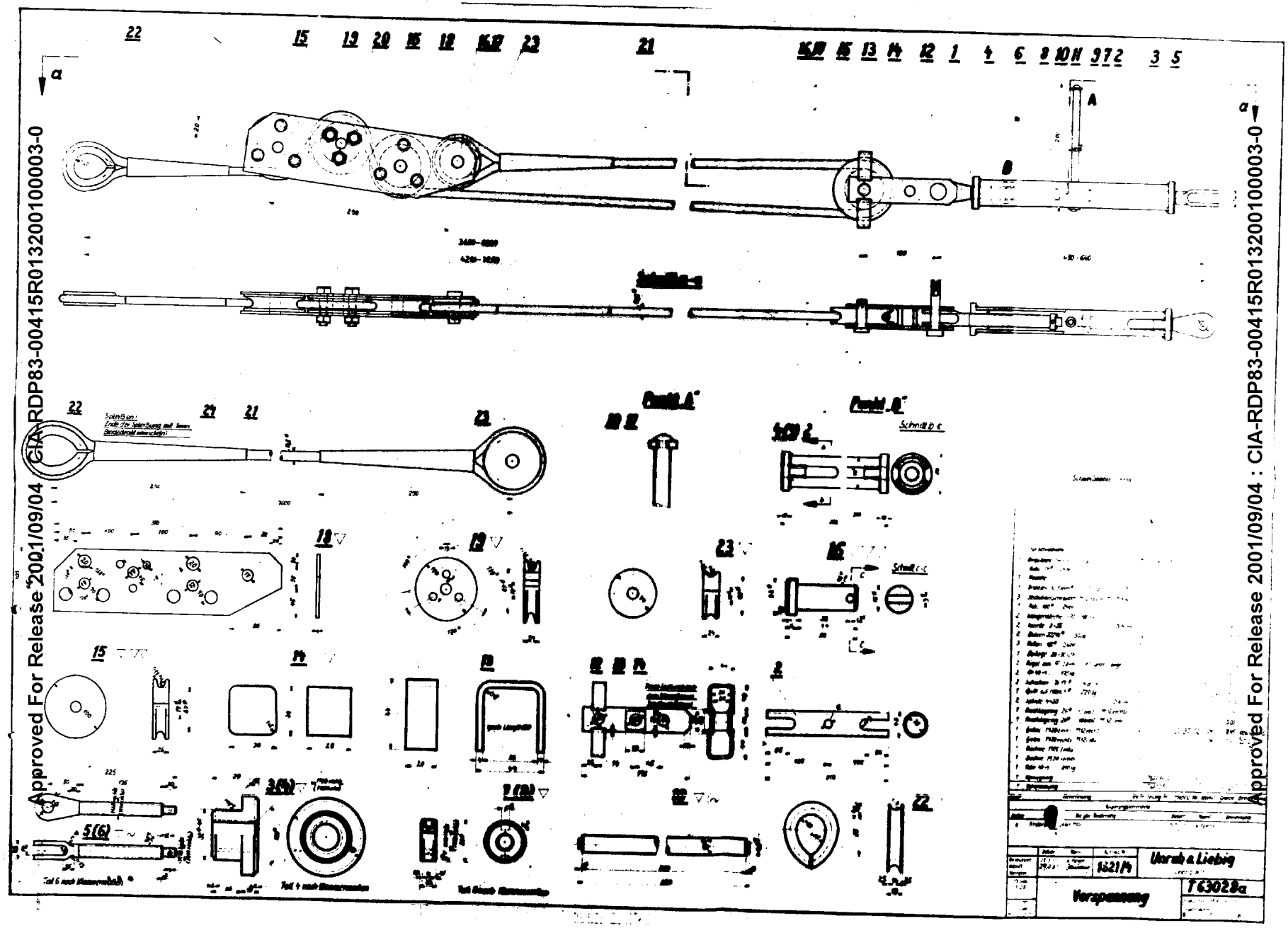
T63027

Ersatz für 4183 R-2
Ersetzt durch

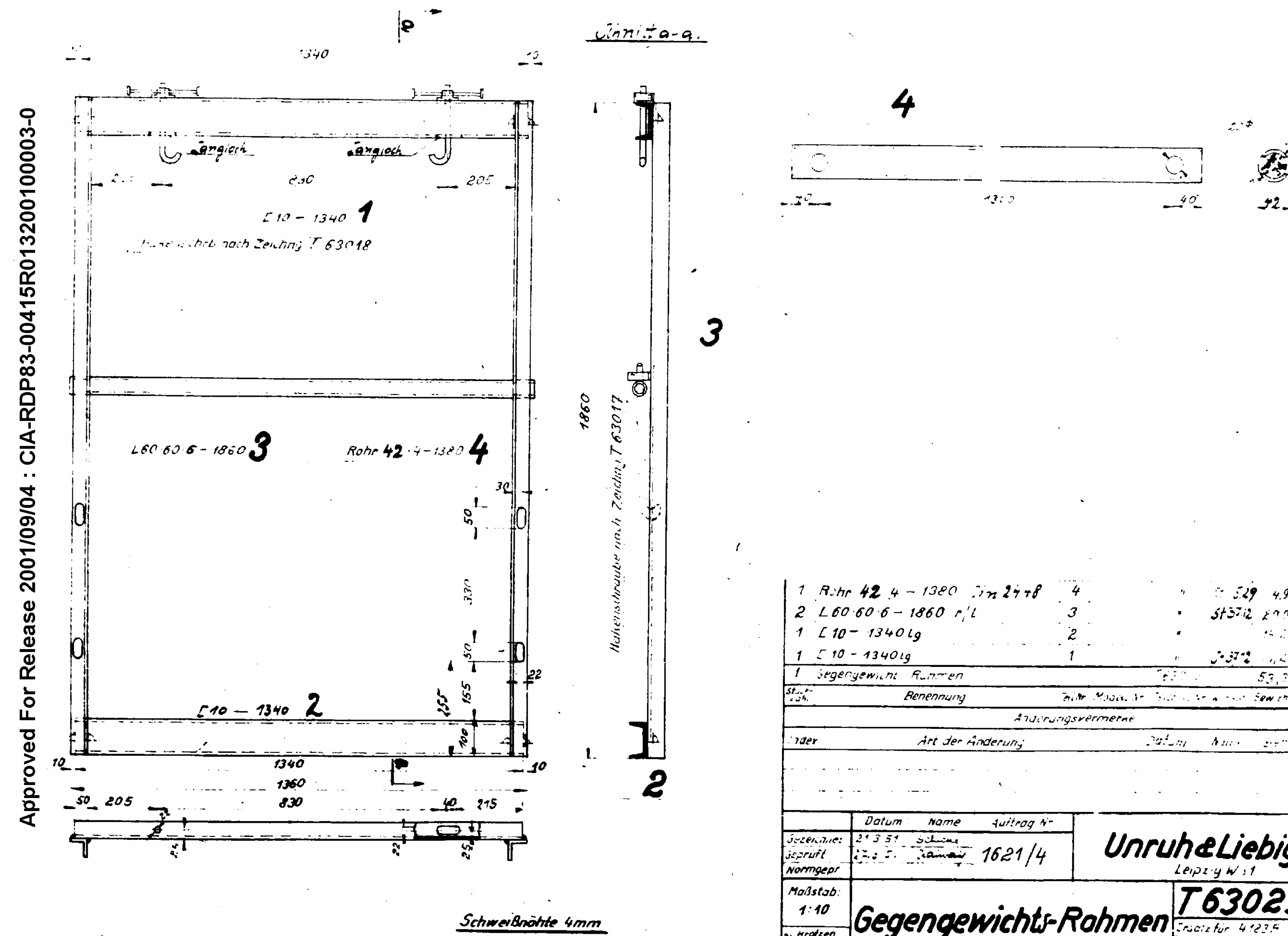
A F B



Approved For Release 2001/09/04 : CIA-RDP83-00415R013200100003-0



Approved For Release 2001/09/04 : CIA-RDP83-00415R013200100003-0



Stück-zahl	Benennung	Teil-Nr.	Werkstoff	Gewicht
1	Rohr 42·4 – 1380 DIN 2448	4	St 35.29	4,9
2	L 60·60·6 – 1860 lg	3	St 37.12	[illegible]
1	[10 – 1340 lg	2		[illegible]
1	[10 – 1340 lg	1	St 37.12	[illegible]
1	Gegengewichts-Rahmen			53,3

Änderungsvermerke

Index	Art der Änderung	Datum	Name

	Datum	Name	Auftrag Nr.
Gezeichnet	21.3.51	Schulze	1621/4
Geprüft			
Normgepr.			

Unruh & Liebig
Leipzig W 31

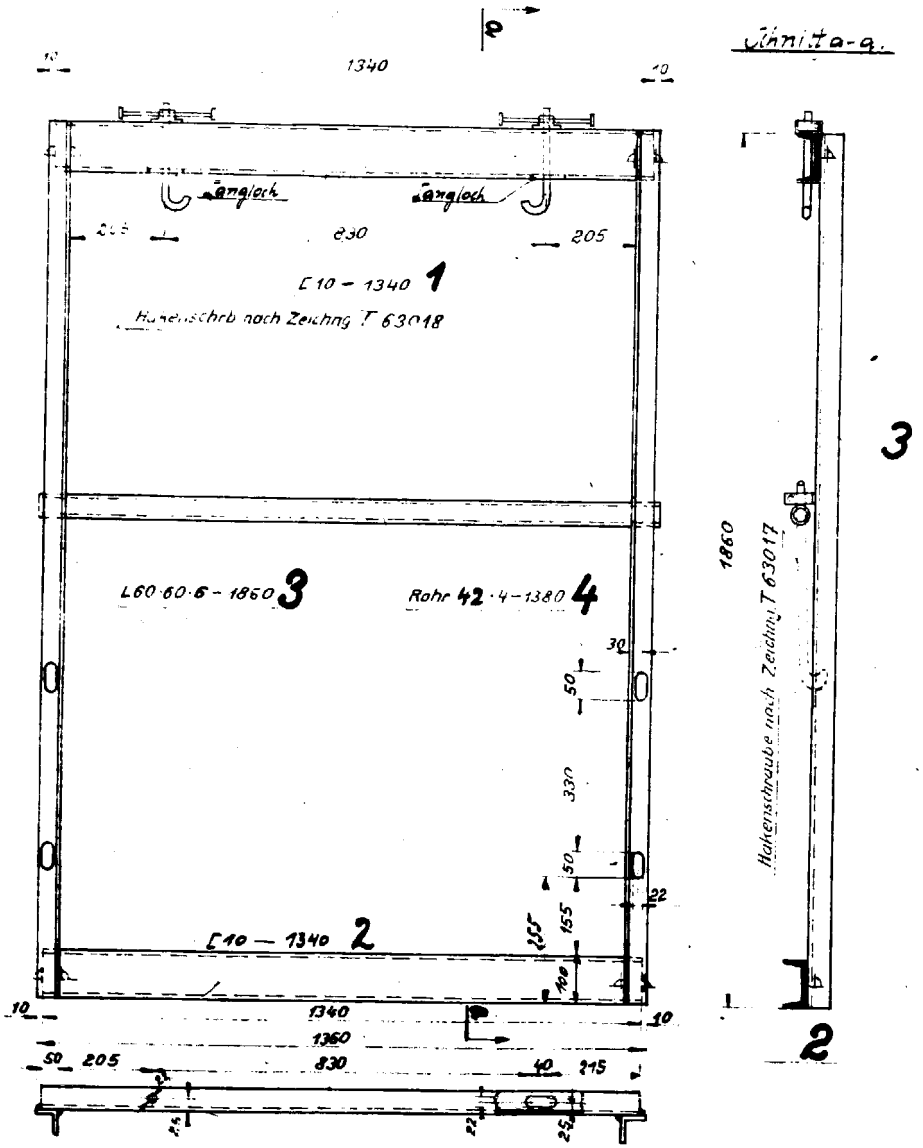
Maßstab: 1:10

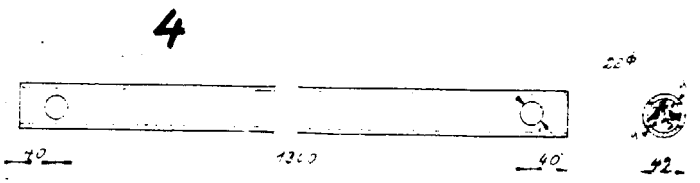
Gegengewichts-Rahmen

T 63029 a

Ersatz für 41235
Ersetzt durch

Approved For Release 2001/09/04 : CIA-RDP83-00415R013200100003-0





1	Rohr 42 4 – 1380 DIN 2448	4	"	St 52	4,9
2	L 60·60·6 – 1860 r/l	3	"	St 37.2	53,3
1	L 10 – 1340 lg	2	"	St 37.2	14,2
1	L 10 – 1340 lg	1	"	St 37.2	14,2
1	Gegengewicht Rahmen				53,3

Stück-zahl	Benennung	Zeichn.-Nr.	Modell-Nr.	Norm-Nr.	Gewicht	Bemerkung

Änderungsvermerke

Index	Art der Änderung	Datum	Name	Bemerkung

	Datum	Name	Auftrag Nr.
Gezeichnet	21.3.51	Schulze	1621/4
Geprüft	27.3.51	Schneider	
Normgepr.			

Unruh & Liebig
Leipzig W 31

Maßstab: 1:10

a. hrotzen
b. schruppen
w. schuchten

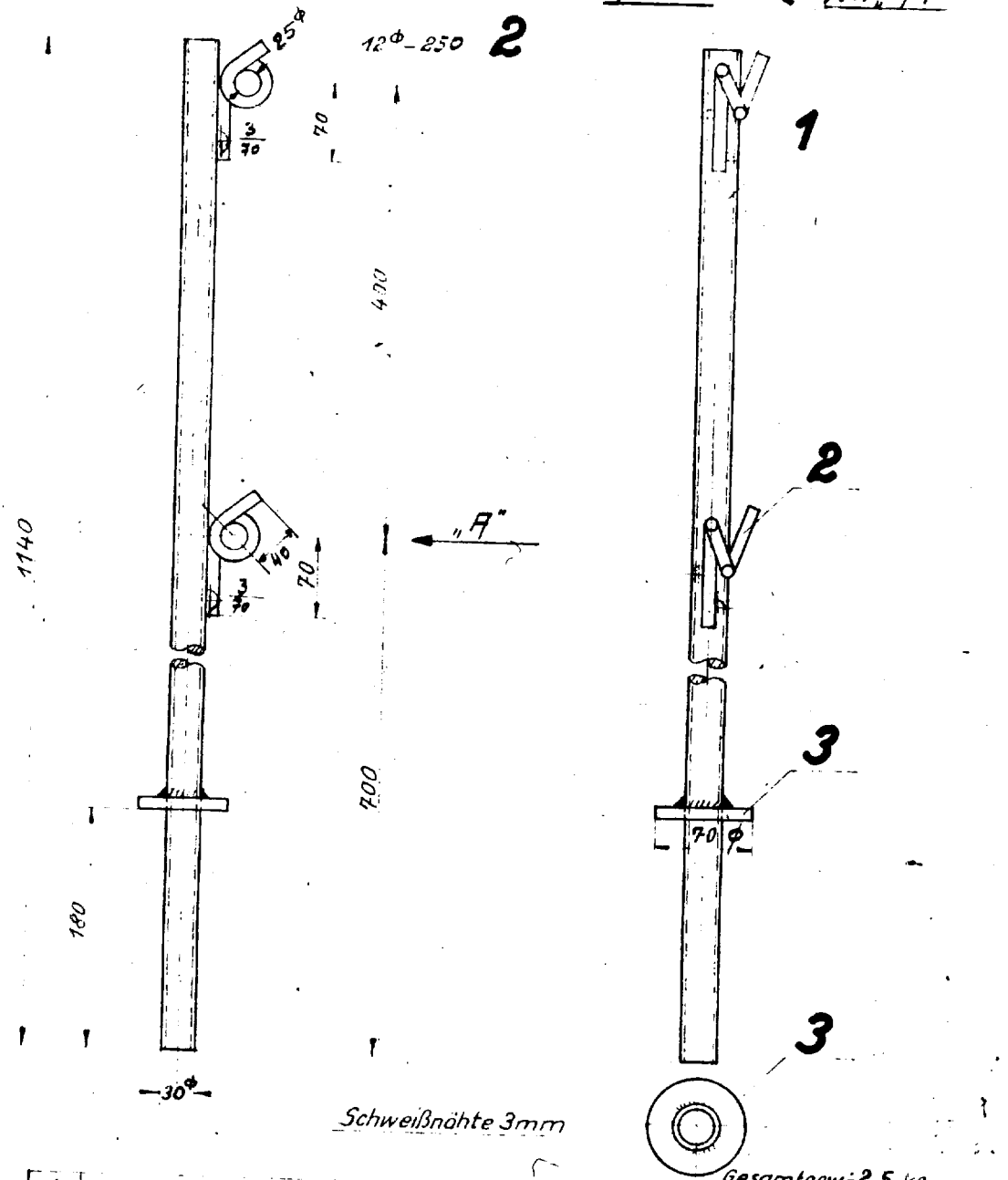
Gegengewichts-Rahmen

T 63029 a

Ersatz für 4123 A 3

Ersetzt durch

A f 9



Schweißnähte 3mm

Gesamtgew.: 2,5 kg

Stück Zahl	Benennung	Teil Nr.	Zeichng Nr.	Modell-Nr.	Werkst.	Gewicht	Bemerkung
1	Scheibe 70Φ 8 st. mit Loch 31Φ	3	"		St 37.12	0,2	
2	Rundstahl 12Φ – 250 lg. gebogen nach Länge	2	"		St 37.12	0,4	
1	Rohr 30×2,5 – 1140, Din 2448	1	T63030		St 35,29	1,9	

	Datum	Name	Auftrag Nr.
Gezeichnet	20.[illegible].51	Schiche	1621/4
Geprüft	27.3.51	Kaiser	
Normgepr.			

Unruh & Liebig
Leipzig W 31

Maßstab 1 5

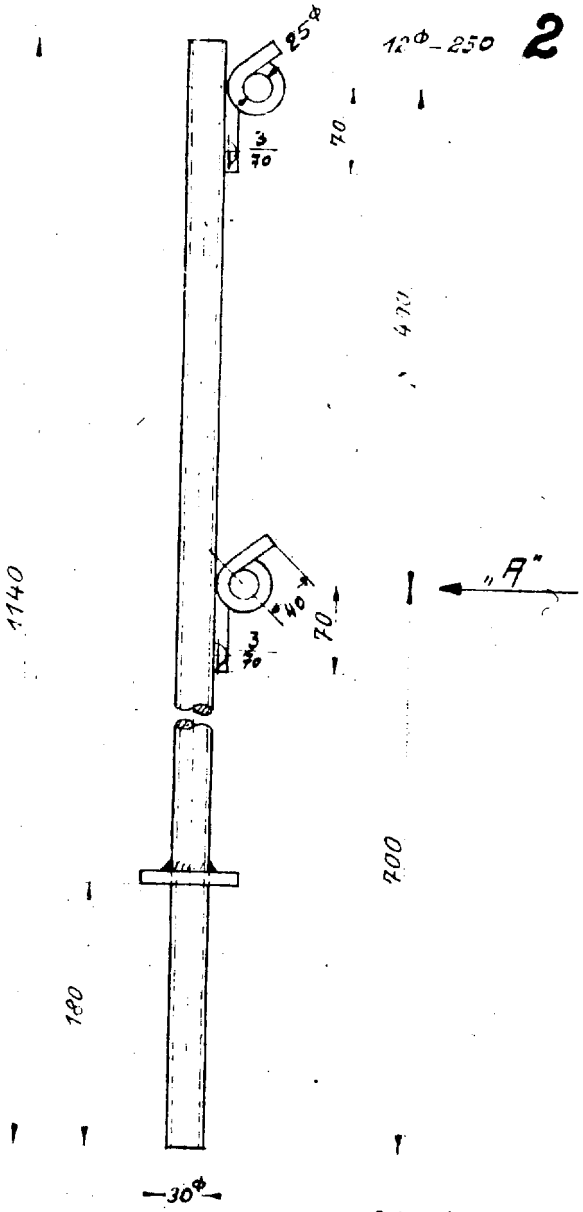
Strebe

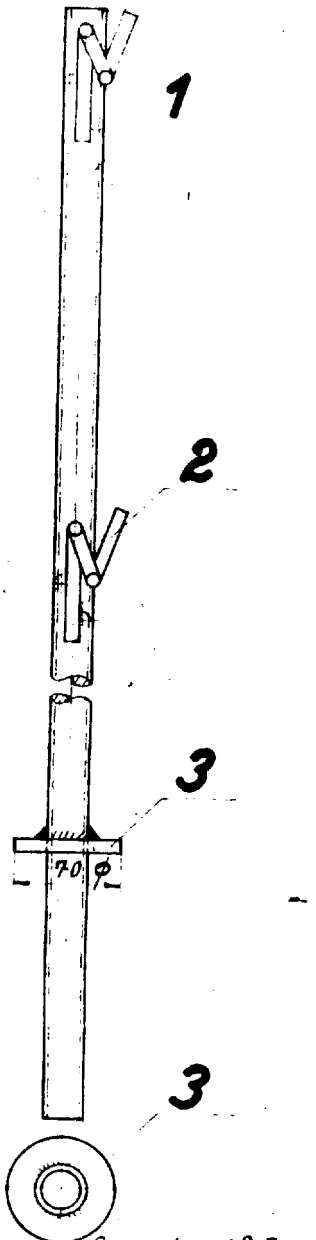
T 63030

Ersatz für 41.52 n. 46

1 F 8

Ansicht Z von „A"





Schweißnähte 3mm

Gesamtgew.: 2,5 kg

Stück Zahl	Benennung	Teil Nr.	Zeichng Nr.	Modell Nr.	Werkst.	Gewicht	Bemerkung
1	Scheibe 70Φ 8 st. mit Loch 31Φ	3			St 37.12	0,2	
2	Rundstahl 12Φ - 250 lg. gerade Länge	2			St 37.12	0,4	
1	Rohr 30×2,5 - 1140 Din 2448	1	T63030		St 35,29	1,9	

	Datum	Name	Auftrag Nr.
Gezeichnet	20 .51	Schicke	1621/4
Geprüft	27.6.51	Tamm	
Normgepr.			

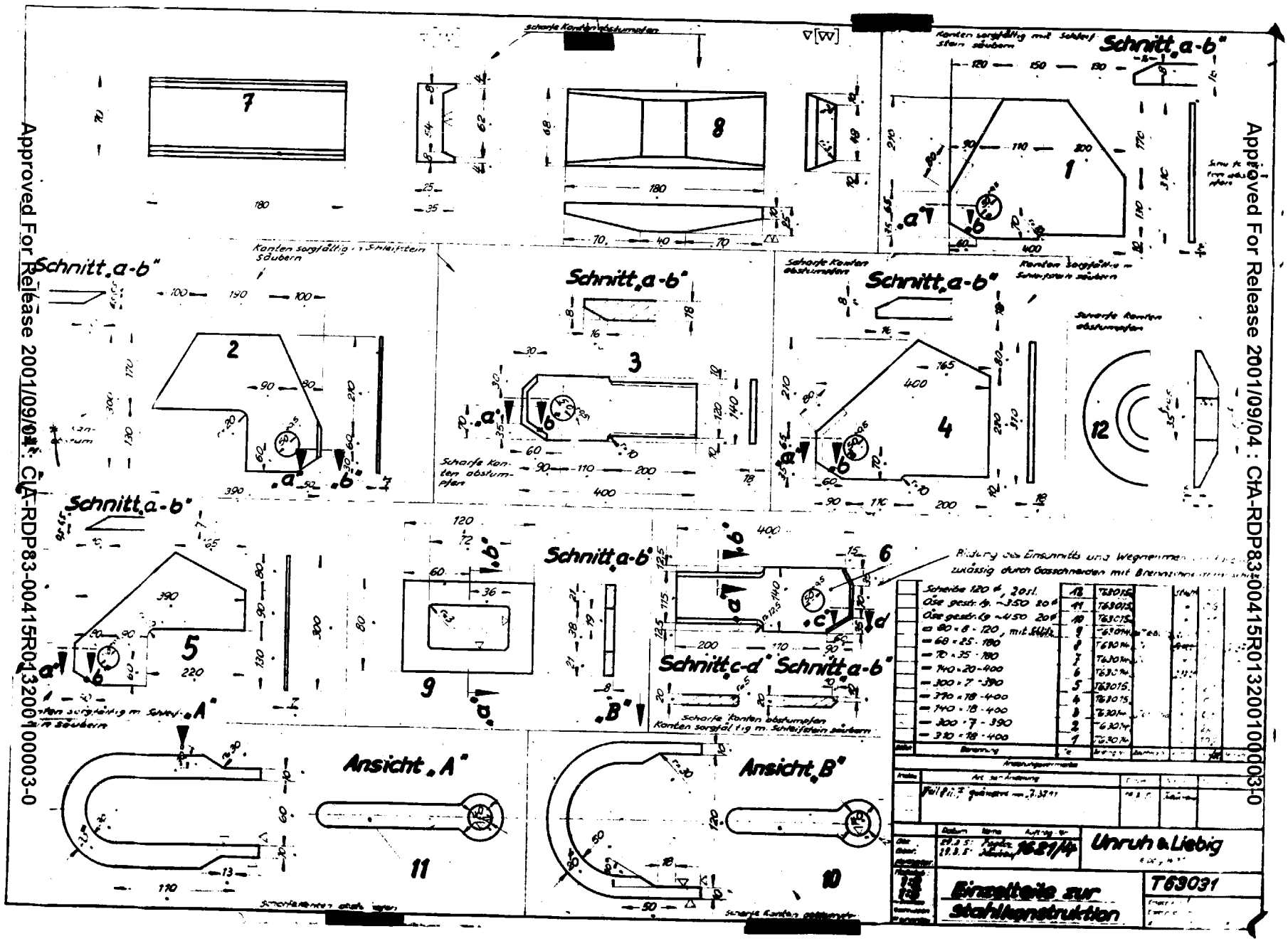
Unruh & Liebig
Leipzig W 31

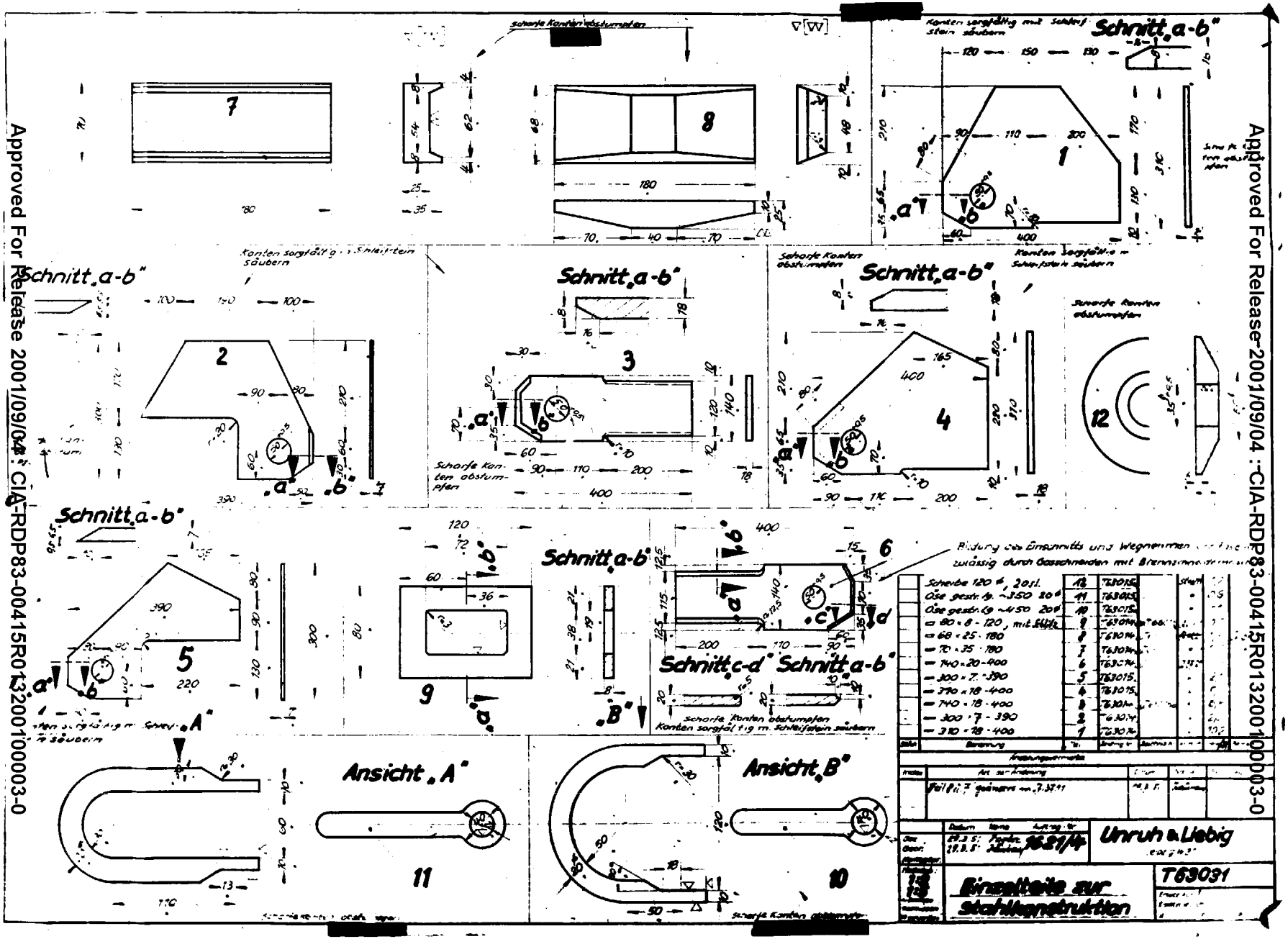
Maßstab 1 5

Strebe

T 63030

Ersatz für 4152.2 46





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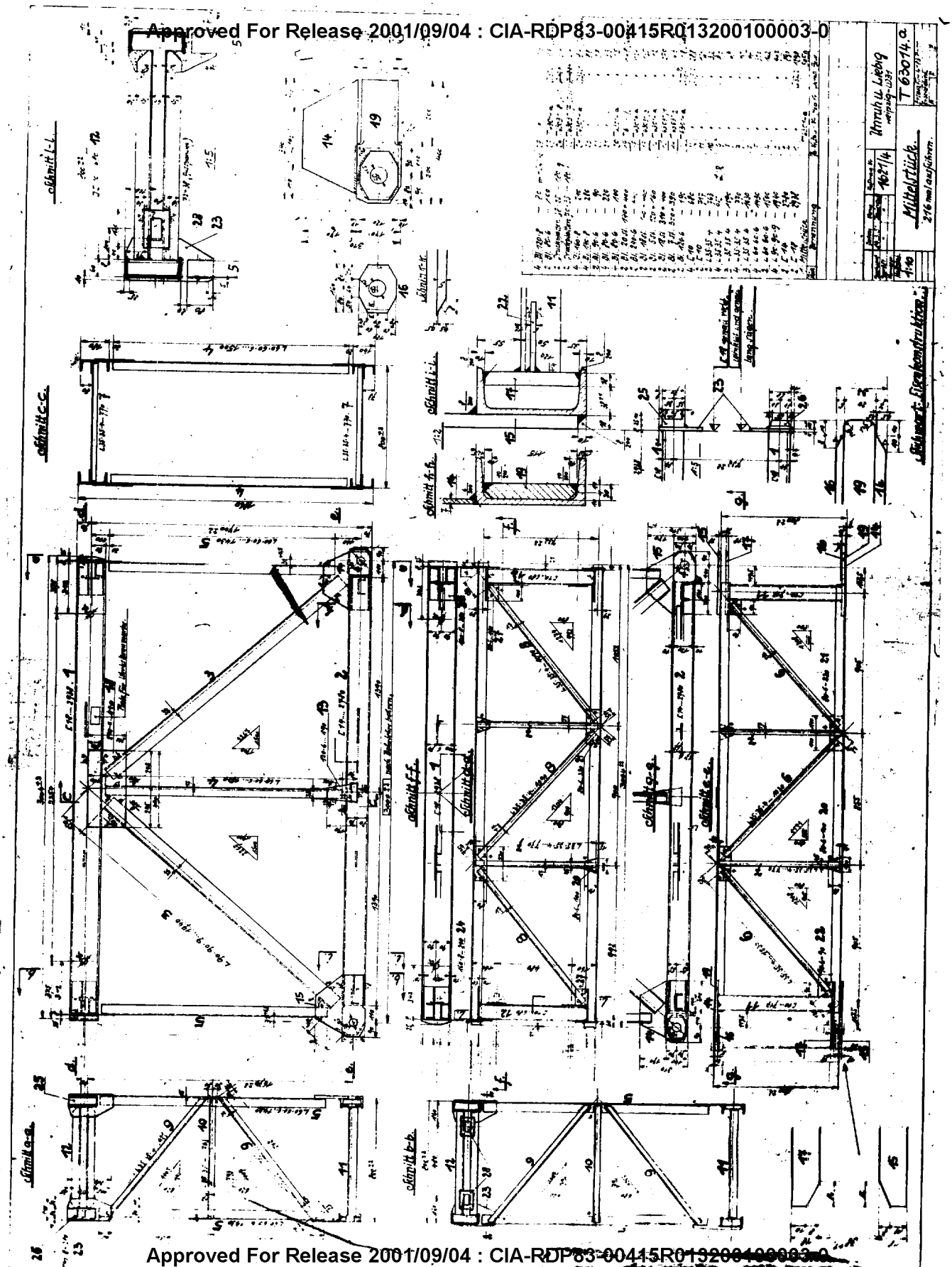

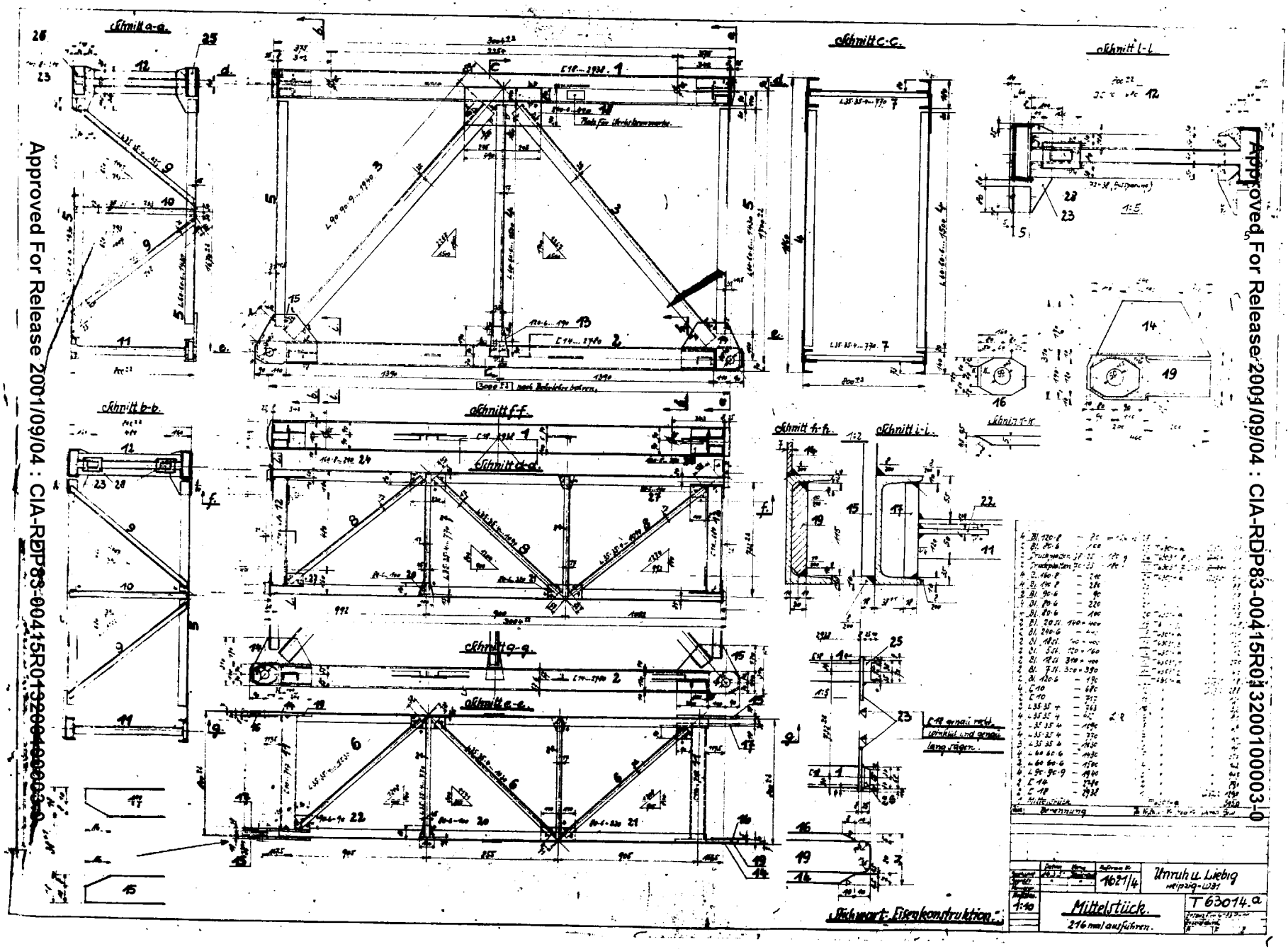

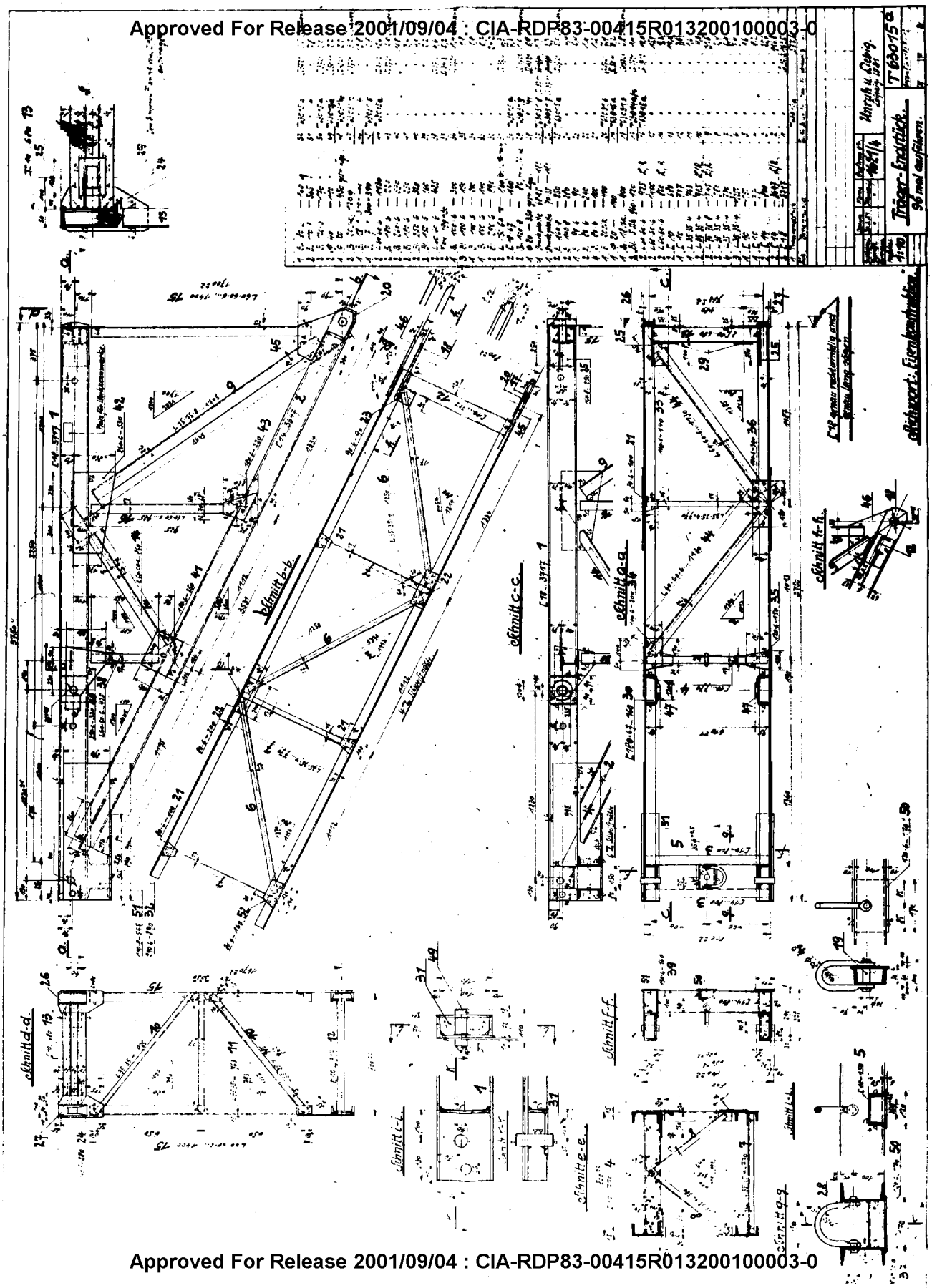

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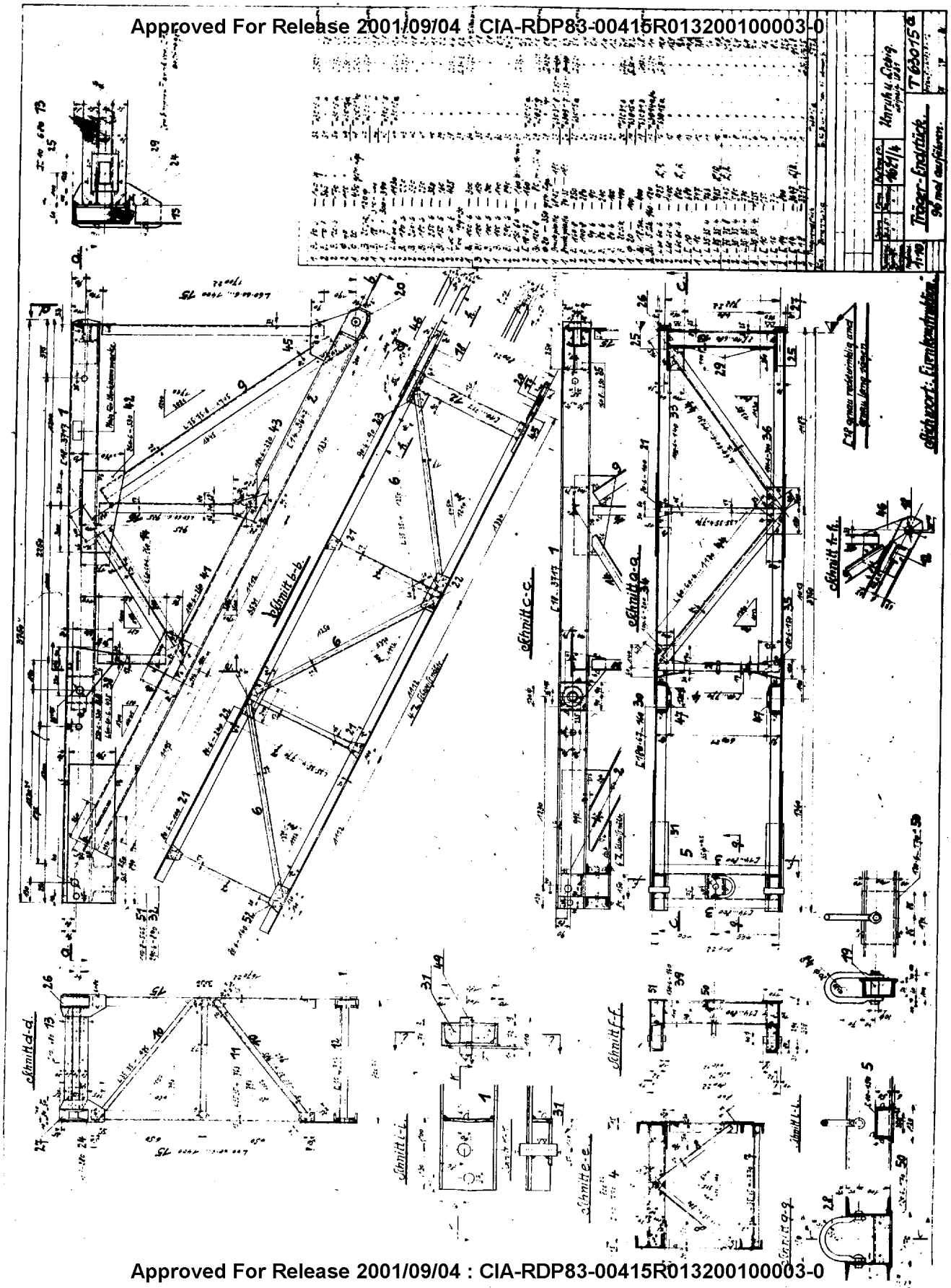

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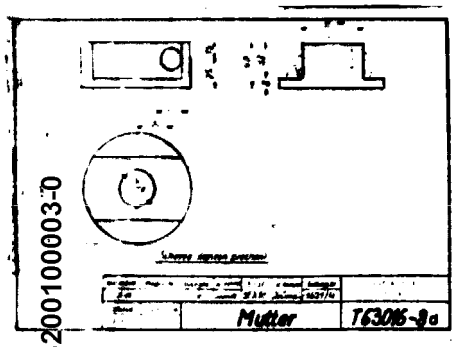
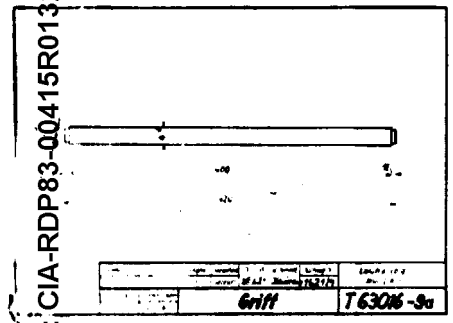
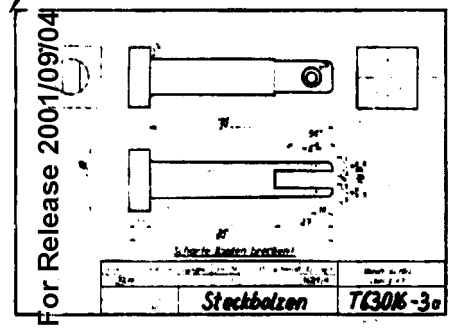


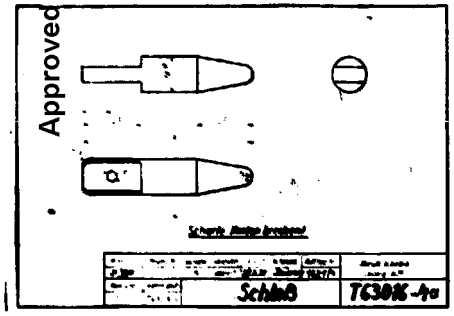
Mutter T63016-8a



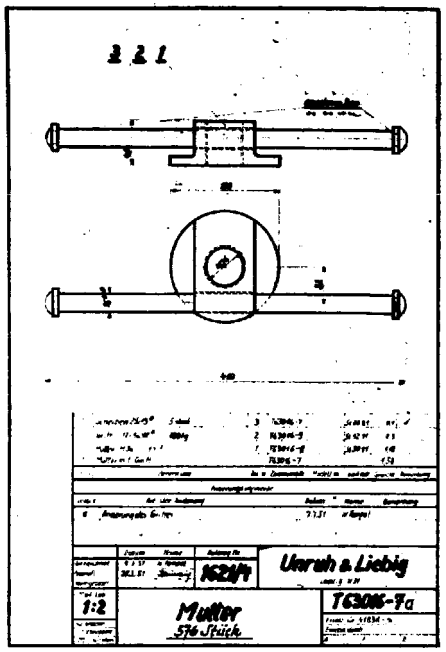
Griff T63016-9a



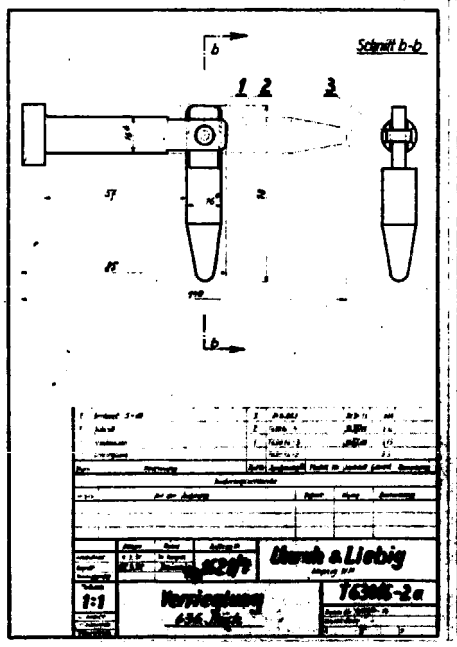
Steckbolzen T63016-3a



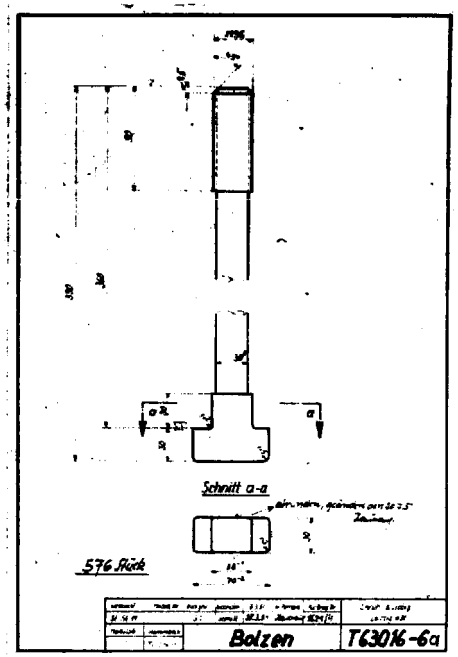
Schloß T63016-4a



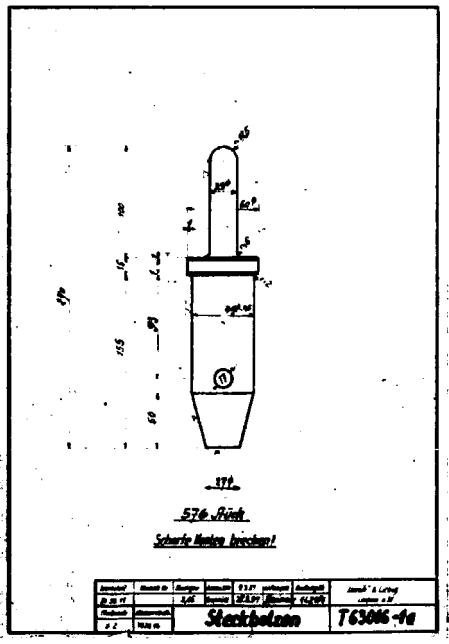
Unruh & Liebig
1621/1
1:2
Mutter
576 Stück
T63016-7a



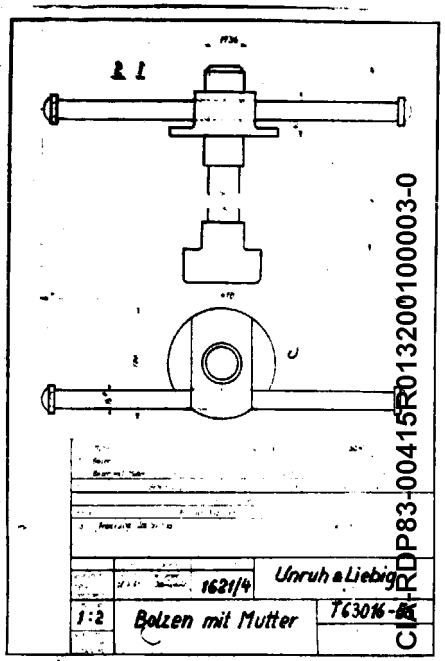
Unruh & Liebig
1621/2
1:1
Verriegelung
576 Stück
T63016-2a



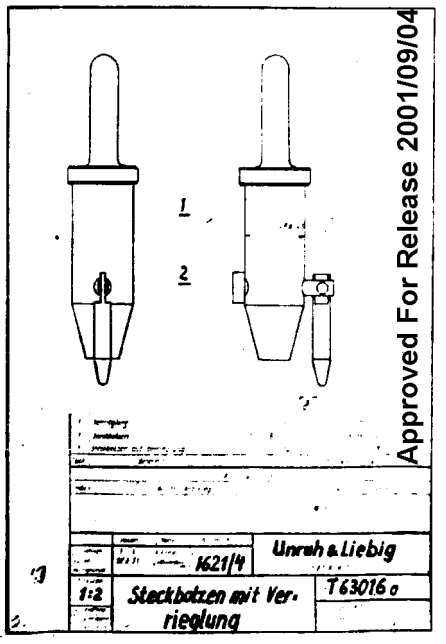
576 Stück
Bolzen T63016-6a



576 Stück
Steckbolzen T63016-1a



Unruh & Liebig
1621/4
1:2
Bolzen mit Mutter
T63016-6a



Unruh & Liebig
1621/4
1:2
Steckbolzen mit Verriegelung
T63016a

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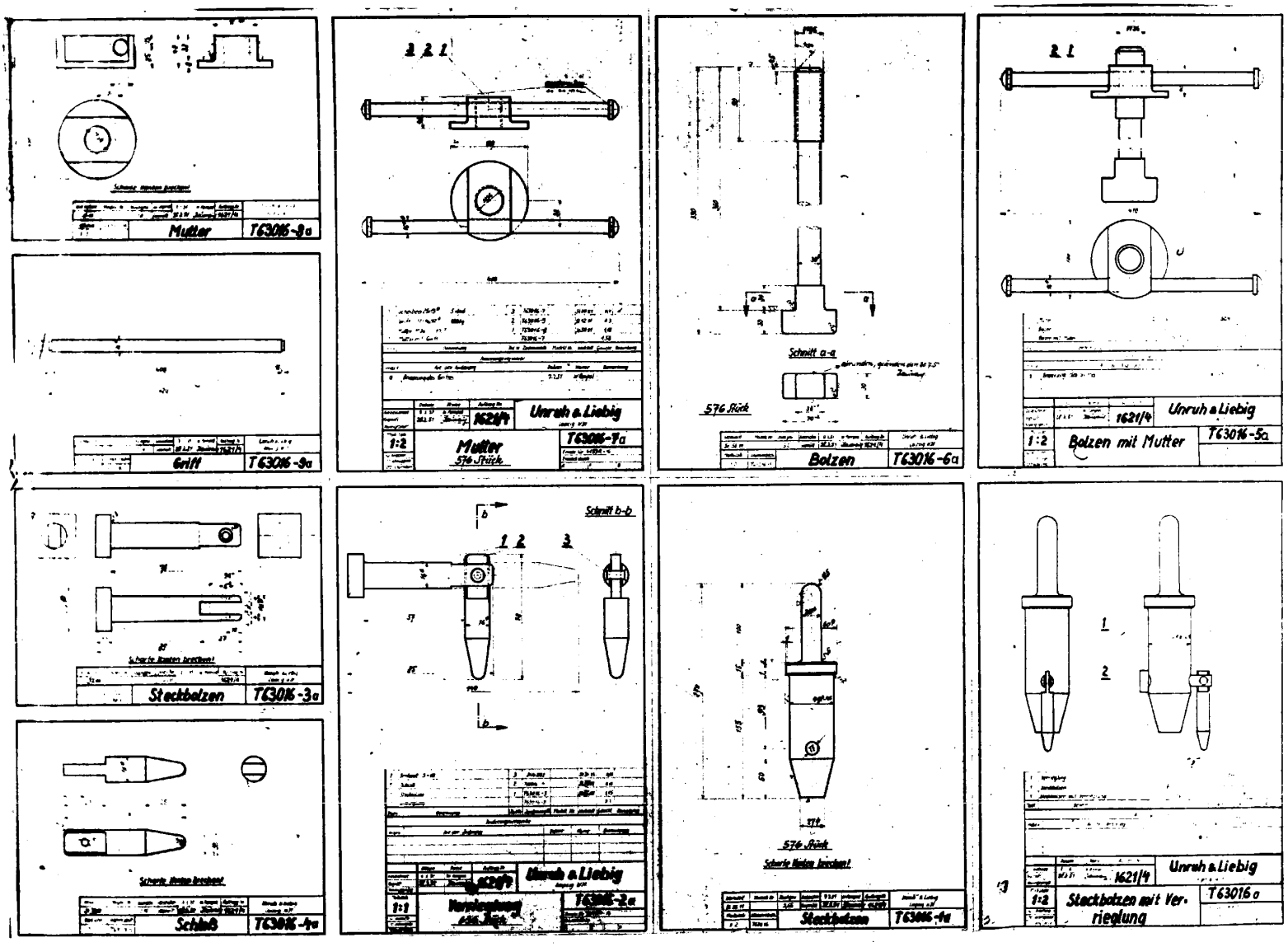

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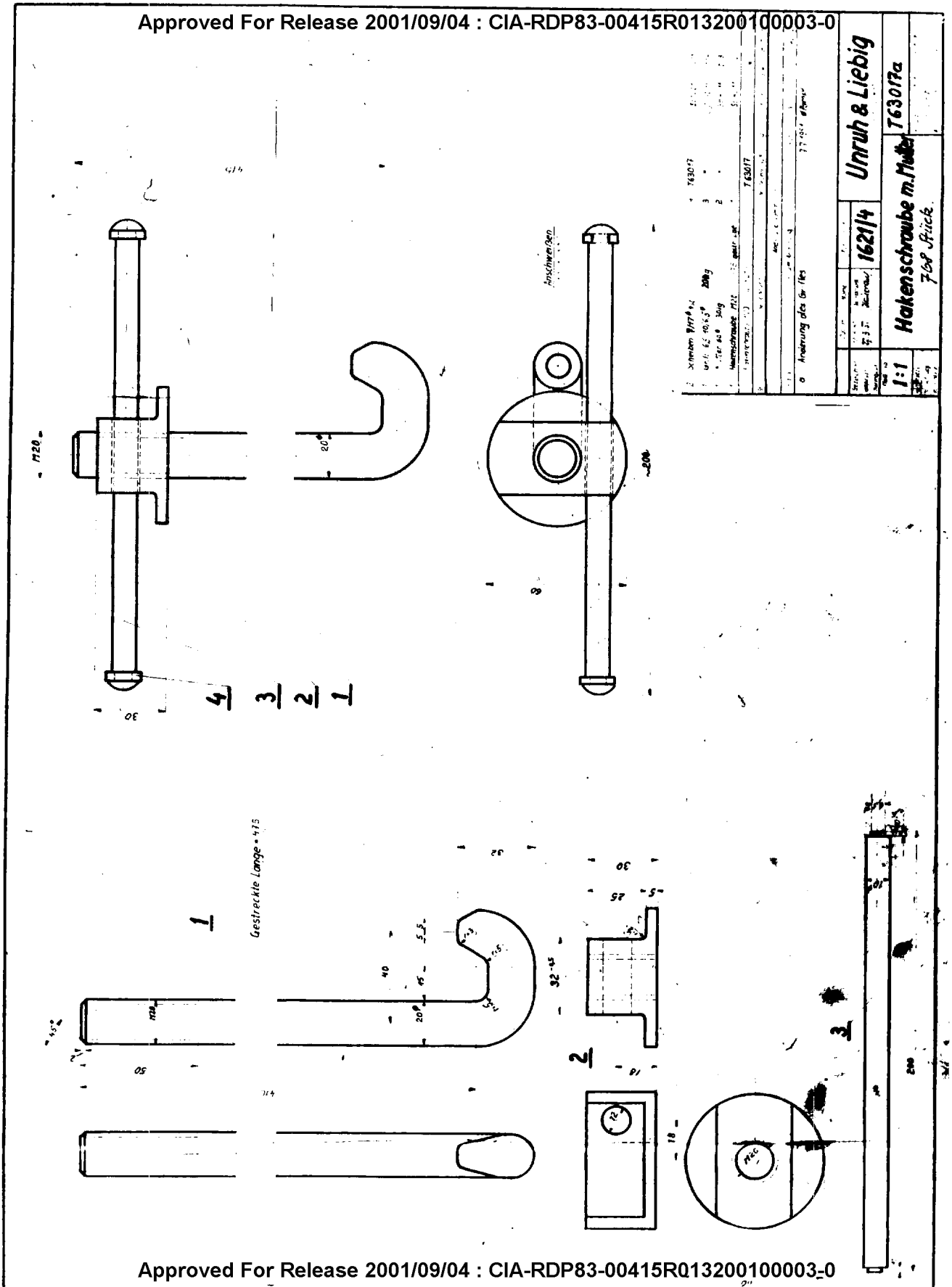
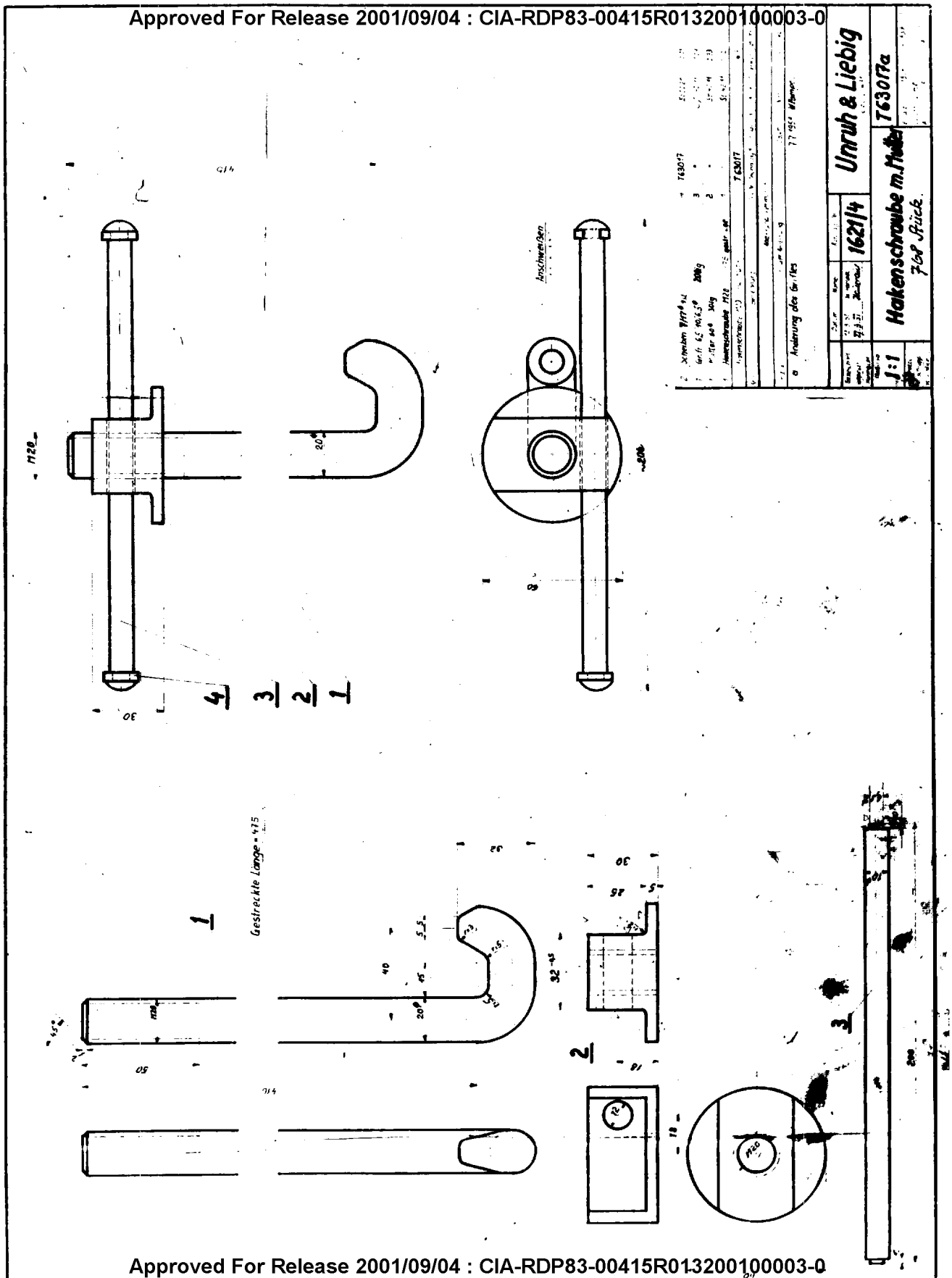
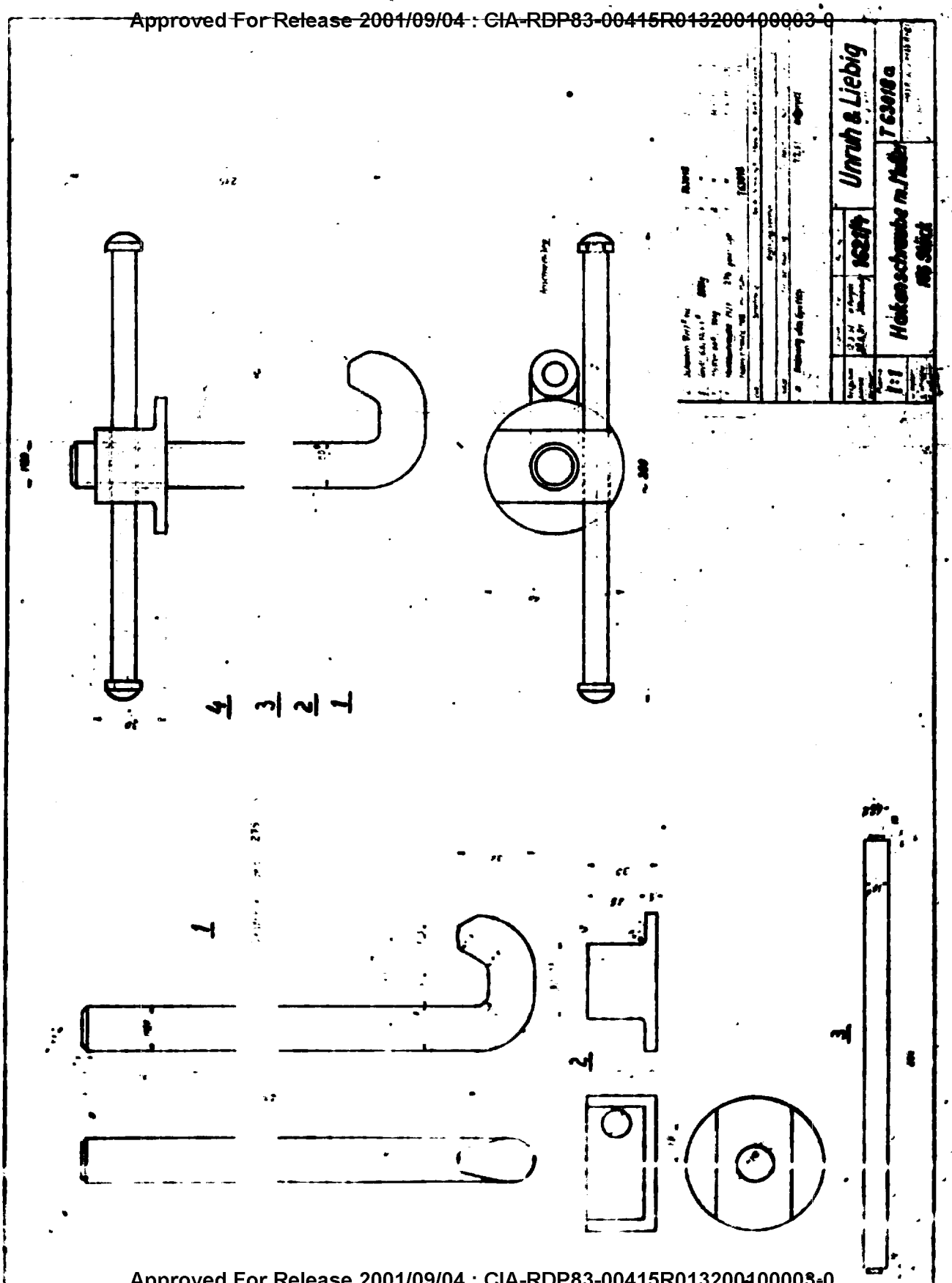
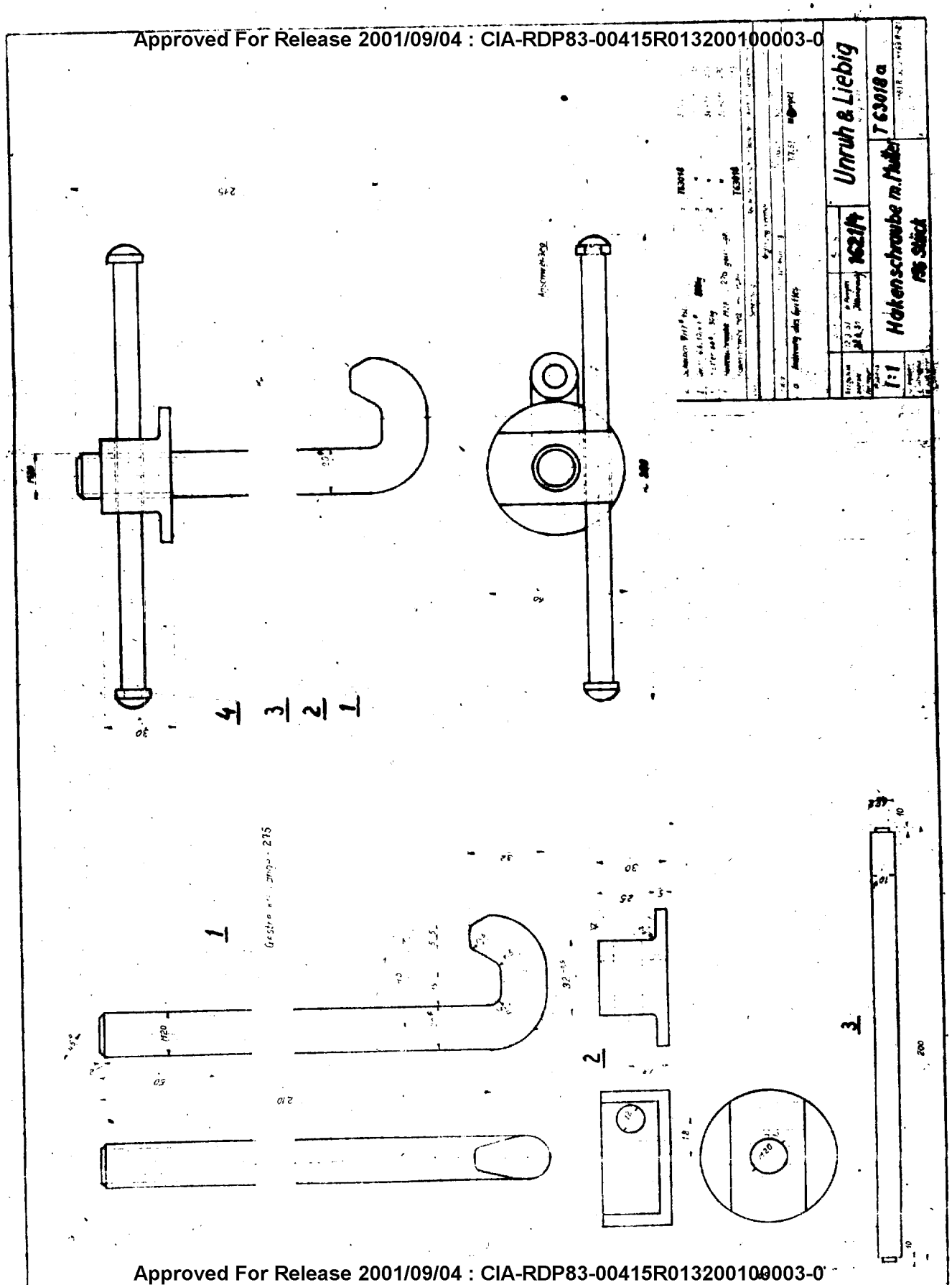
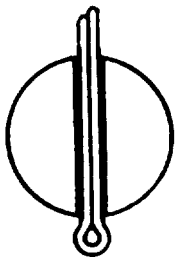




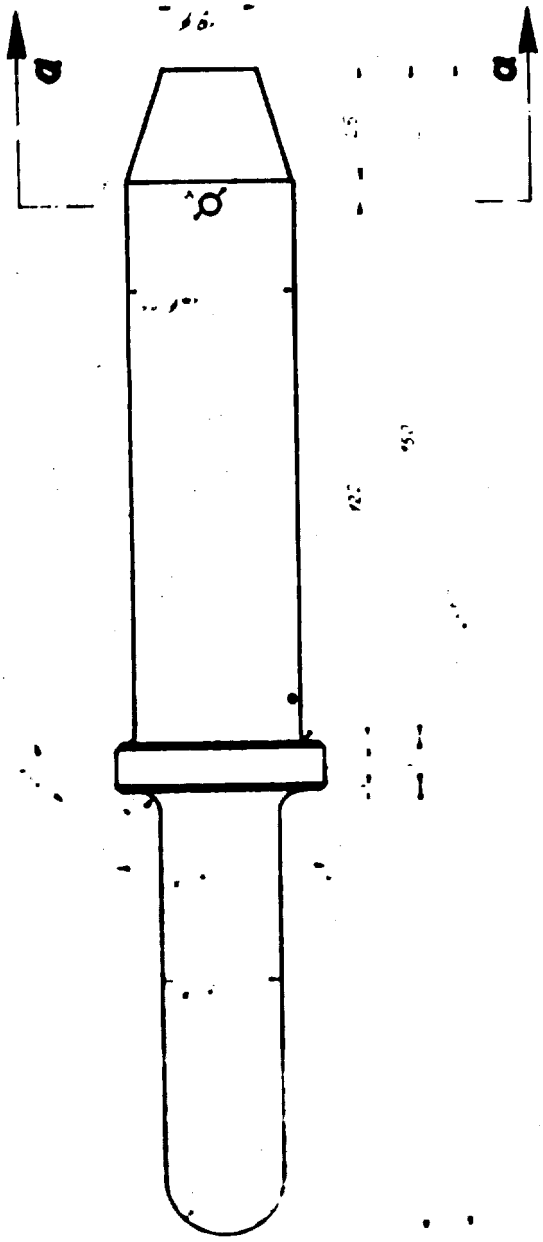




Schnitt a-a

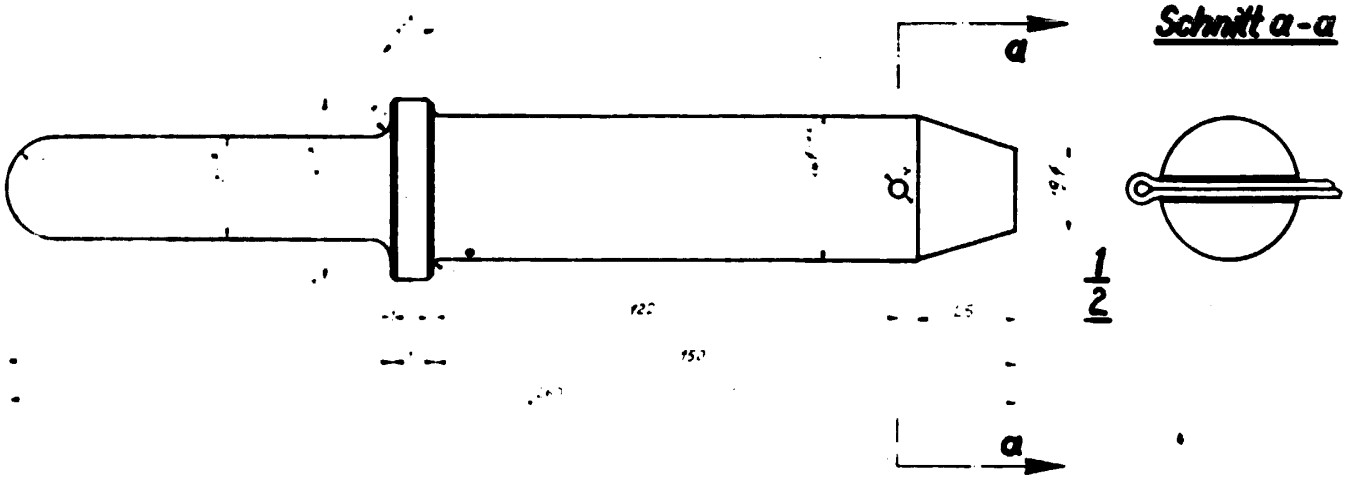


1/2



Scharfe Kanten brechen!

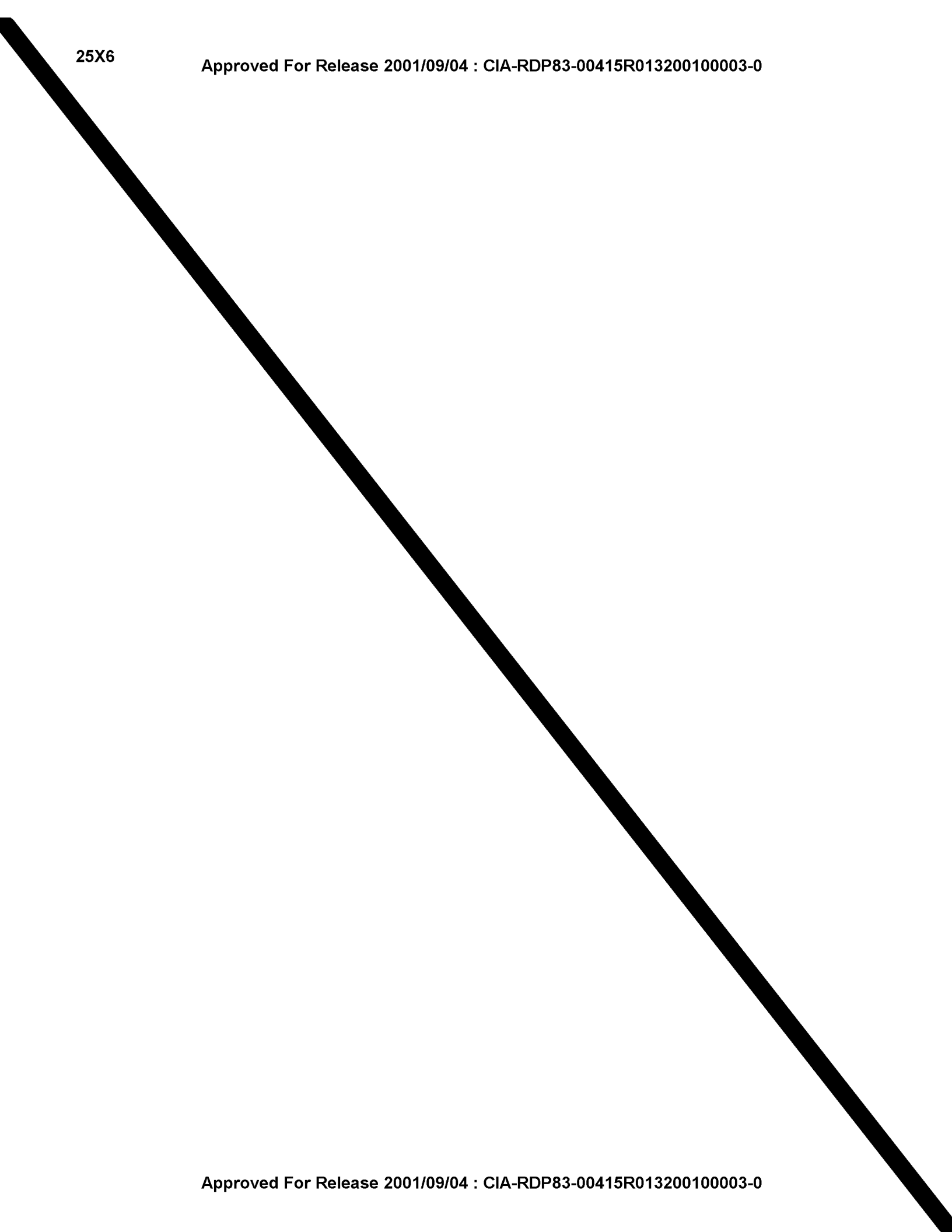
Unruh & Liebig		T63019	
	1621/4	Steckbolzen 45° Tuss	
	1:1		



Schnitt a-a

Scharfe Kanten brechen!

Index	Art der Änderung	Datum
	1621/4	Unruh & Liebig
1:1	Steckbolzen	T63019



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